

# AIRFIX magazine

October 1975  
FOR PLASTIC MODELLERS  
monthly 25p



## in this issue

Sea Harrier conversion in 1:72 scale  
Modelling a Brunswick jager of 1777  
Detailing 'Amazon' Class frigates



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# AIRFIX magazine

October 1975  
Volume 17 Number 2

## Cover Picture

The new General Dynamics F16 prototype, 01567, flew into Britain recently to become the star attraction at the USAF open day at Alconbury. Its sleek lines are well captured in this photograph by S. G. Richards. Come on somebody, how about a kit?

# FOR PLASTIC MODELLERS

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Editorial Director Darryl Reach  
Editor Bruce Quarrie

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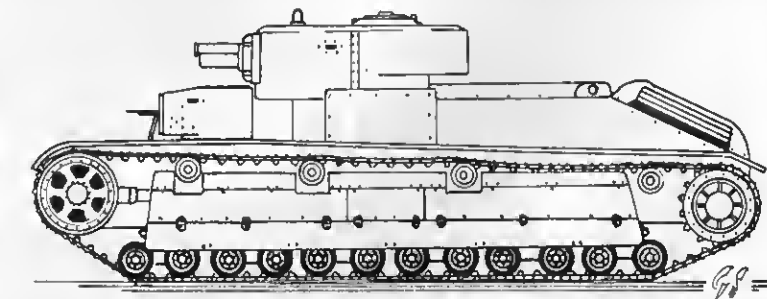
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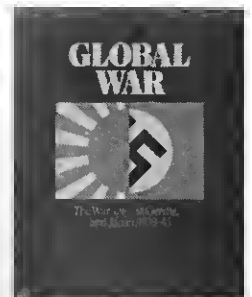
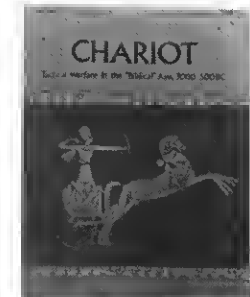
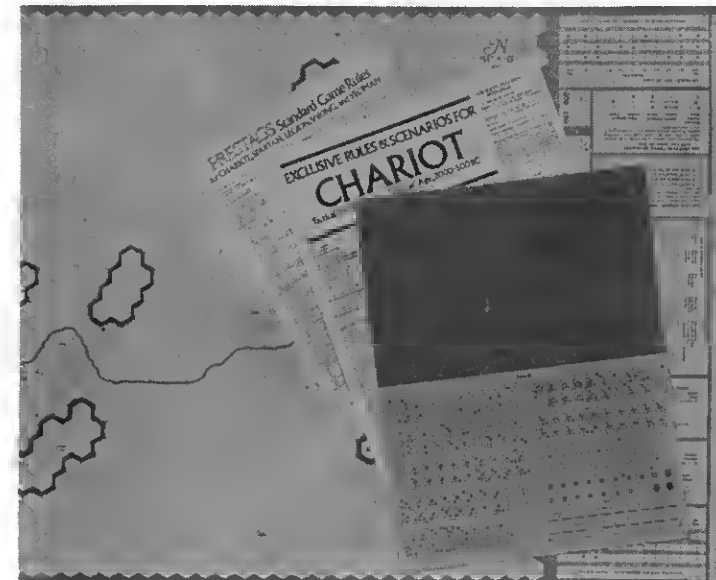
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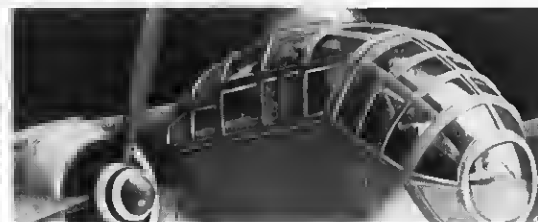
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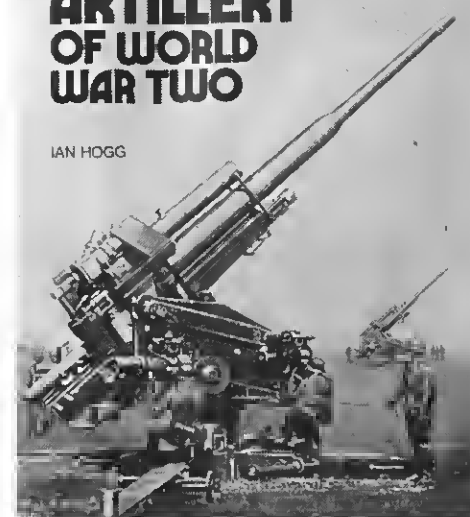
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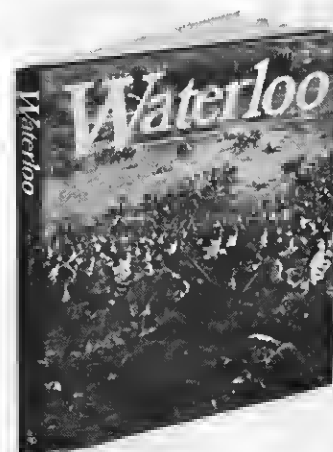


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## in the air

### Army Air Day, Middle Wallop

SOME OF the air displays that are mounted in the summer months can tend to become rather repetitive, with the same types of aircraft and events appearing at each event. However, the Army Air Day, held at the Army Air Corps Centre, Middle Wallop, at the end of June, proved to be a refreshingly different display, with many interesting aircraft presented in a novel way.

In addition to dozens of machines from many British Army units, including aircraft flown over from bases in Germany, both the United States Army and the West German Army (the Heeresflieger) provided a varied range of helicopter types.

The main static park consisted of all the types in use with the AAC and included a Chipmunk, a Beaver, and Bell 47G, Sioux, Scout, Alouette 2 and Gazelle helicopters, and other machines could be seen in various stages of maintenance in a hangar. Also many of the flying display aircraft were available for close inspection, and there were several other exhibits covering various Army roles and activities.

The West German contingent comprised two UH-1Ds from Leichtes Heeresflieger-transport regiment 10 at Celle, and two CH-53G Sea Stallions from Mittleres HflgTptRgt 15 based at Rheine/Bentlage, both these units being in the 1st Korps. In the flying display one of the UH-1s gave an excellent handling demonstration, at times

on autorotation, whilst the two large CH-53s proved to be surprisingly agile.

The US Army sent four types of helicopter from their bases in West Germany, consisting of two Bell OH-58A Kiowas and several Bell AH-1G Huey Cobras, all from the 334th Aviation Company based at Hanau, two CH-47C Chinooks from the 180th Aviation

Company, and a Sikorsky CH-54A Skycrane of the 295th Aviation Company based at Mainz/Finthen.

The 334th Aviation Company, which saw service in Vietnam, has 21 Huey Cobras on strength, equally divided between three platoons, the 1st platoon being known as 'The Playboys', the 2nd as 'The Raiders' and the 3rd as 'The Dragons'. The 334th also operates 12 Kiowas and three UH-1s, and was the first unit to use the AH-1G in Europe.

The flying display opened with one of the most interesting and impressive items seen at any show for many years. Prior to the display 96 helicopters of ten different types had deployed to positions away from Middle Wallop, and these then made a mass approach onto the airfield from in front of the crowd, in line abreast waves. The first rank consisted of AH-1Gs, OH-58As and UH-1Ds, and these were followed by waves



Right CH-54A Skycrane 68-18458 from the 295th Aviation Company arrives with a Scorpion tank. Below Four 334th Aviation Company Huey Cobras return to their dispersals after the mass approach.







Above Impressive supply drop from five Beavers. Below OH-58A Kiowa 21400 from the 3rd Platoon, 334th Aviation Company, US Army. Khaki overall with black nose and markings. Badge on side is a red dragon with khaki wings and yellow breast on a blue square. Tailplane has dull red upper surfaces, tail rotor red end white. Bottom CH-47C Chinook 68-15819 from the 180th Aviation Company. Khaki overall. Not a Sters and Stripes on fin.



after wave of British Army Slouxs, Scouts, Allouette 2s and Gazelles. Camouflage, together with some very low flying ensured that many of the helicopters did not become visible until they crossed the airfield boundary. The rear rank was completed by the large machines from the US and West German Armies, and after a few minutes each row slipped away to left and right and returned to their dispersals around the airfield.

Continued on page 80

Nose badge on Skycrane 68-18458 of the 295th Aviation Company. White rectangle with black cross, yellow lion on red shield. 'BONN' is in white.



AIRFIX magazine

## AIRFIX NEW MODELS FILE

The Desert Rats, or the British Eighth Army as they were more correctly known, were established in September 1941. They were organised by their Commander, General Sir Alan Cunningham, into the XIII Corps and XXX Corps – the latter incorporating the famous 7th Armoured Division.

The British Eighth Army was formed after some of the most fierce battles of the Second World War along the North African coast.

For three years German and Italian forces fought the British and Commonwealth armies to gain access to the vital Suez Canal.

In November 1941 Operation Crusader relieved the beleaguered fortress of Tobruk. A counter-attack by Rommel early in 1942 forced the allied armies back to El Alamein. However, following a major battle, the Eighth Army forced the Germans to retreat and finally on May 13, 1943 on the Cap Bon Peninsula the African campaign ended.

A total of 43 British Army Regiments were represented in the Eighth Army and were divided into four armoured divisions and four infantry divisions.

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## THE DESERT RATS THAT WERE A PLAGUE ON ROMMEL.





**Above** A trio of Huey Cobras pass in a low level high speed run. **Far left** Badge of Leichtes Heeresfliegertransportregiment 10 on sides of UH-1D 73+60. Yellow shield, white building with red roof, all other detail black. **Left** 180th Aviation Company badge on forward rotor head of Chinook 68-15819. Green 'Chinook' with yellow arms and cigar on white disc. All other detail black. **Below** CH-53G 85+00 from MiHFlgTptRgt 15 demonstrates its troop-carrying capabilities. **Bottom** New Gazelle AH 1 from No 3 CBAS in dark green and very dark grey with white code on fin and central nose panel. Note title 'ROYAL MARINES' in black between roundel and serial.

Continued from page 78

This was followed by a very pleasant display by eight Chipmunks, flown by civilian instructors from the Elementary Fixed Wing Flight at Middle Wallop. Known as 'The Grey Owls', they performed formation flypasts complete with coloured smoke. All the Chipmunks seen at Middle Wallop wore the new training colours of red/white/grey.

Then came an air race involving all types of AAC aircraft, and other items of interest included formation demonstrations by Scout and Gazelle helicopters, a supply drop from five Beavers, and two massed parachute drops by members of 664 Parachute Squadron AAC from an RAF Hercules.

The RAF also provided formation aerobatics in the shape of the 'Poachers' Jet Provost team from Cranwell, and a brisk display from a Puma of No 230 Squadron, Odiham.

Nostalgia was awakened by two Skeeters and a pair of Auster AOP 9s, together with some nice aerobatics from all-yellow two-seater Spitfire Mk VIII G-AIDN. In contrast was a noisy demonstration by an Army helicopter of the future, the Lynx, notable for its tight rolls.

For its slot in the programme, the US Army presented a Chinook disgorging several troops, the Sky Crane lifted a Scorpion tank, and four Huey Cobras displayed formation manoeuvres trailing coloured smoke. These gunships can pack a powerful punch, with a 7.62 mm Minigun and a 40 mm grenade launcher mounted in the nose, whilst the stub-wings bore a 20 mm Minigun and two multi-cell rocket pods. Like the Lynx, the AH-1G is also distinctive for its



harsh noise.

This was followed by the usual mock battle, with several helicopters lifting in men and weapons. Of interest here were the newly delivered Gazelles of No 3 Commando Brigade Air Squadron from Coypool,

near Plymouth, bearing the title 'ROYAL MARINES' aft of the roundels.

The final item was the usual excellent performance from the five Sioux helicopters of the 'Blue Eagles' display team, thus concluding a most enjoyable event. □

AIRFIX magazine

## AIRFIX NEW MODELS FILE

In 1941 the German High Command considered the strategic possibilities of conquering Egypt and the Suez Canal. In February, the 5th Light Division containing elements from the 3rd Panzer Division were despatched to Tripoli and renamed the 21st Panzer Division. In April they were joined by the 15th Panzer Division.

Together they formed the Deutsche Afrika Korps subsequently known as the Afrika Korps under the command of General Rommel, who was promoted in September 1941 to the rank of Field Marshal.

In 1942 Rommel lost at El Alamein and finally on May 13, 1943 the African campaign ended in victory for the British Eighth Army (the Desert Rats).

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## DESTROYED BY RATS.



# Operation Sealion — the German forces

Wehrmacht, Luftwaffe and Kriegsmarine units and equipment described by Terry Wise

AT THE END of July 1940, 11 infantry and two mountain divisions, the first wave for the invasion of England, arrived at the French coast. Here each division was divided into two echelons; the first having 7,000 men, eight mountain guns, eight smoke projectors, a high proportion of the division's machine-guns, mortars and A/T guns, the essential minimum of wheeled vehicles, 2,000 bicycles and 300 horses. (In 1940 much of an infantry division's transport was horse-drawn, including the organic artillery companies.) Total figures for the first echelon were 90,000 men and 4,000 horses. 52 batteries of A/A guns were also allotted to the first echelons and all these forces had to be landed within the first two to three hours.

The second echelon consisted of the remaining 12,000 men, 40 field howitzers, the rest of the automatic weapons and the bulk of the transport. Total figures 156,000 men, 60,000 horses, 30,000-40,000 wheeled vehicles and about 500 field howitzers. The second wave would consist of six panzer divisions and three motorised divisions; 24,000 men, 900 tanks, 500 guns, 3,500 vehicles, 7,000 horses and re-supply for the troops already ashore. The first wave would be supported by 'mobile elements', the most important of which were tanks, for the difficulties of landing armour on shelving beaches during the initial assault were so great that all panzer divisions had been allocated to the second

wave. The first-wave armour was limited to one squadron of tanks, landed from landing craft built for amphibious operations in the Baltic; a few armoured cars and light tanks landed from beached barges (their bows were to be blown off); and 262 amphibious tanks. The U-tanks took two forms, the PzKpfw II supported by a flotation collar (*behalter*), and submersible PzKpfw IIIs and IVs. The PzKpfw II *behalter* was in three compartments, filled with celluloid rods to minimise the intake of water if damaged, and was provided with an engine and a small propeller, giving a speed of just over six mph. The turret ring was sealed by an inflated tube which prevented the turret turning whilst seaborne, although the gun could be fired end some 'traverse' obtained by using the rudder. Once ashore the seal was deflated, the *behalter* probably jettisoned by controls inside the tank, and the PzKpfw II became fully operational. The submersible tanks were made completely watertight, the turret and its emment being covered by a rubber hood which was blown off by a small explosive charge once ashore. The turret ring seal was a rubber gasket of wedge section and the prob-

lem of its removal was never completely solved. A flexible air pipe, carried by a buoy with a snorkel valve, provided air for engine and crew while submerged. The crew was provided with submarine escape apparatus and the tank directed to the shore by radio. By August 22 there were 52 floating tanks and 210 submersibles (*tauchpanzer*); probably 50 PzKpfw IVs and 160 PzKpfw IIIs. The first wave Corps of 16th Army (7th, 13th and 38th) each had one battalion of these tanks (probably 13 PzKpfw IIIs, 50 PzKpfw IIIs, 12 PzKpfw IVs) and 9th Army had one battalion. (Readers might like to know that the *tauchpanzers* were used to cross the Bug and Dneiper Rivers during Operation Barbarossa.) When the plan for a narrow front was adopted the first wave was reduced to nine divisions, the U-tanks, 38 A/A ferries equipped to deal with air or surface targets, and 72 rocket projectors capable of firing 432 rounds up to 6,000 metres in five seconds. The second wave became four armoured, two motorised and two infantry divisions, with two motorised regiments. The third wave was reduced to six infantry divisions; the fourth wave would not be designated until ten days before embarkation.

## The Navy

The Navy had the problem of transporting these forces across the Channel and keeping them supplied: a seven day mobile campaign might use 3,000,000 gallons of petrol — 4,000 barge loads. The Navy calculated that even if a third of the A/A batteries were left behind, the first echelons would need 45 transports, 640 barges, 215 tugs and 550 motor boats. Transportation of the second echelons in one wave was not possible; the shipping was not available and nor was there room for it in the embarkation area if it could be found. The Naval Staff therefore suggested the whole of the first wave be landed over a period of ten days, in which case a total of 155 transports, 1,722 barges, 471 tugs and 1,162 motor boats would be required. This being agreed, the Navy set about finding the vessels. Approximately a third of the transports and large numbers of barges, tugs and motor boats came from France and the Low Countries, but even so about a third of the German merchant fleet and all

3.7 cm PAK 35/36 (Terry Gander).

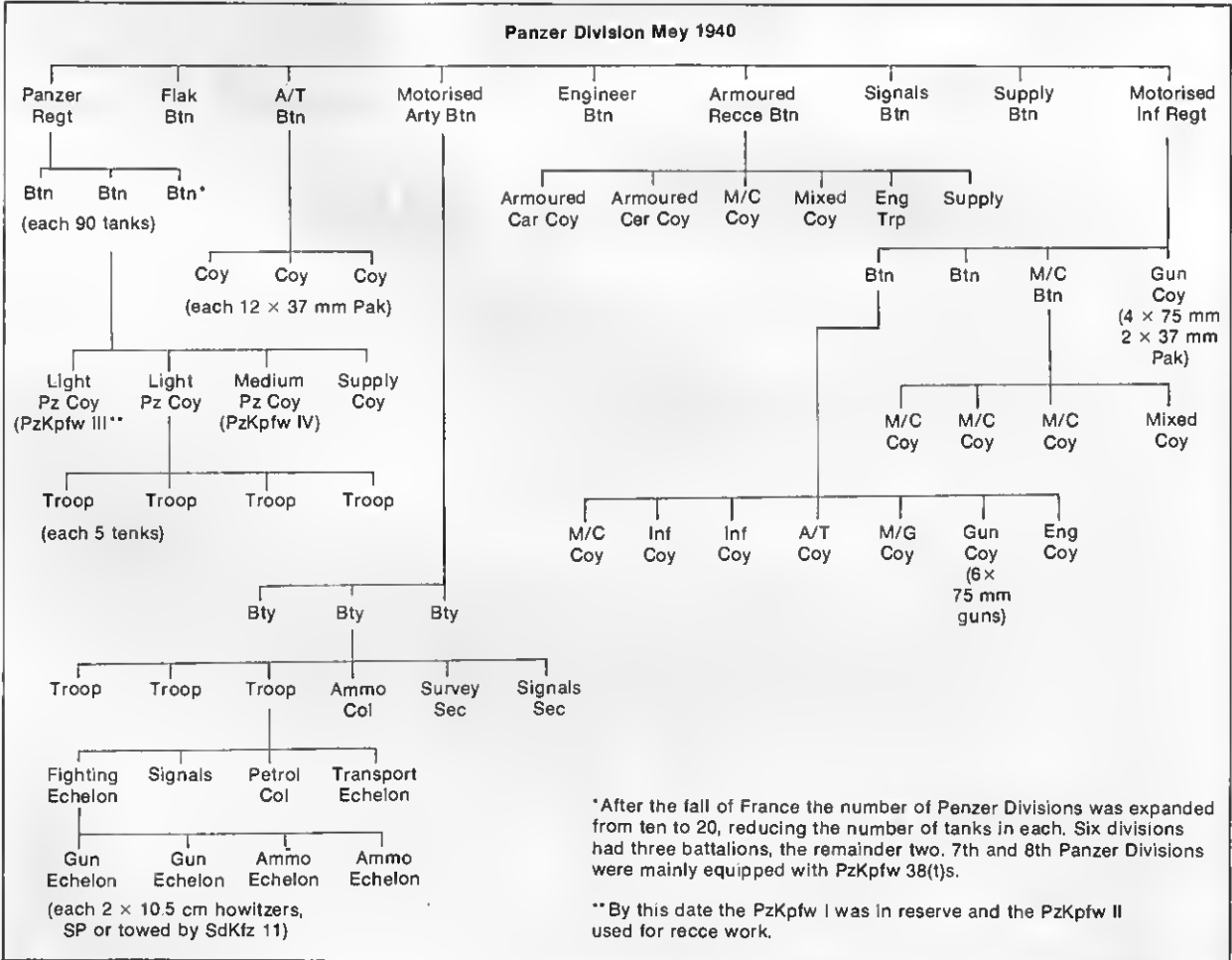


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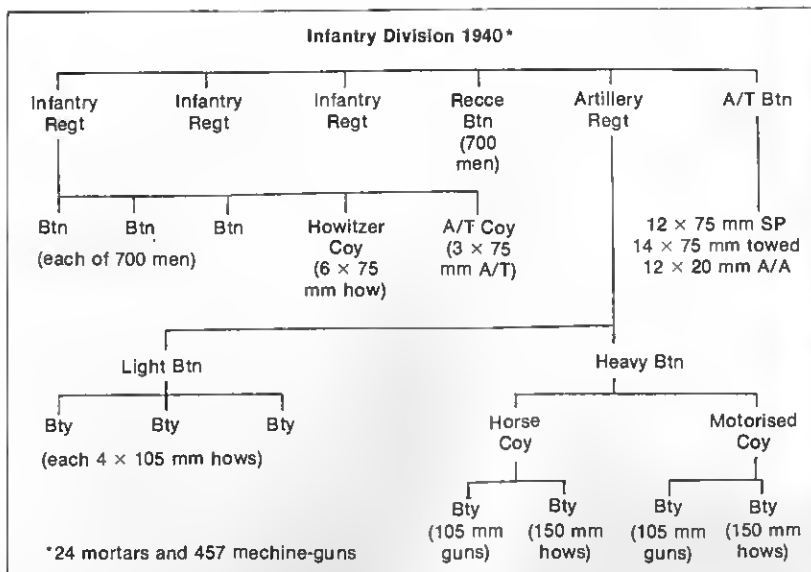


Senior German officers watch a demonstration with a submersible PzKpfw III, somewhere off the French coast, 1940.

1,300 tons. There were very few of the large, self-propelled river barges, capable of landing 400 men and their equipment, and most of the barges would have to be towed in strings of four or six by the tugs. The speed of such strings would be two to three knots, slower than Caesar's crossing 2,000 years earlier! Because of this some of the largest barges, taking over the assault troops, were to be lashed between two minesweepers. These would probably be able to make four knots. (The transports had an average speed of ten knots.) The barges were adapted by removing part of the bows and replacing this with a ramp. Concrete floors were added to some to enable them to carry vehicles, AFVs and artillery. Initial petrol supply would be by pipeline from tanker barges and in jerry cans in lorries. Some barges had A/A guns mounted on them. Minesweepers, motor and fishing boats were to be used to launch over 100 'storm-boats', each carrying six men and a coxswain. These boats could pass over any obstacles without damage, land their shock troops to seize the beaches, and return for fresh loads. Rubber dinghies would almost certainly have been used for the same purpose. Other ideas were self-propelled ferro-concrete blockhouses, mounted on caterpillar tracks and known as War Tortoises;





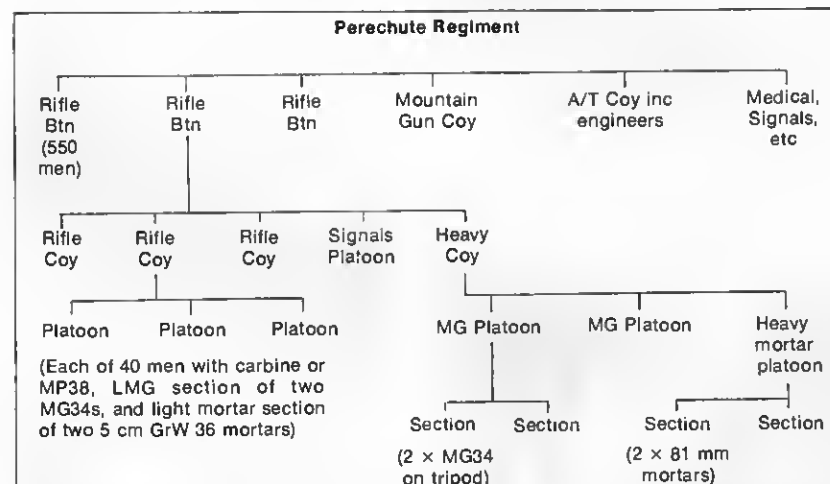


and two pontoons joined by a platform to provide mountings for A/A guns and 6-inch guns for artillery support. Neither of these ideas seems to have come to fruition and artillery support was eventually limited to 3-inch and 37 mm cannon mounted on 27

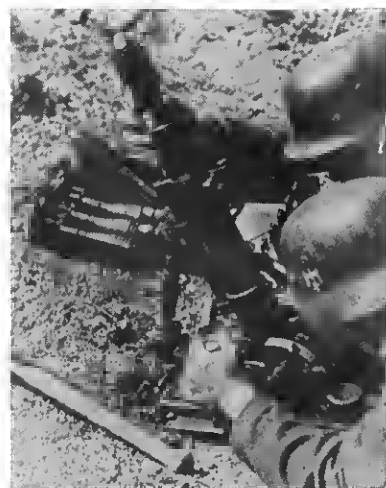
self-propelled coastal craft. In mid-August the Navy did consider using the two old battleships *Schlesien* and *Schleswig-Holstein* to support the landings (they had been used for coastal bombardment in the Polish campaign) but by then there was insuffi-

**Table 1**  
Invasion fleet at September 7 1940.

Shipping at embarkation Ports	Total assembled (including those in transit)	Lost or damaged by RN or RAF during September	Estimated requirement
Transports	170	21	155
Barges	1918	214	1722
Tugs	386	5	471
Motor boats	1020	3	1162



Although there were only two parachute regiments in 1940, all sources consulted state that a maximum of 6-7,000 paratroopers were available for Seelöwe. I have made a conservative estimate of 5,000 paratroopers yet, despite heavy casualties in Holland, this is still far greater than the number suggested by the above organisation table. Any comments would be appreciated.



5 cm light mortar. Weight 31 lb, max range 570 yards, HE bomb weight 2.2 lb, rate of fire six rounds in eight seconds (IWM).

cient time to equip them with A/A and submarine defences.

After the landing of the first echelons the Navy expected heavy attacks by the RN and knew it could not hope to protect the crossing lanes at all times — particularly when bad weather prevented flying. Between late June and late September the Navy had only one heavy cruiser, three light cruisers and nine destroyers (five at Le Havre, three at Cherbourg, and one in the North Sea.) All other major warships were either sunk, damaged and in dock, or not yet in commission. Once the battleships of the Home Fleet arrived, an estimated 48 hours after the first landings, the German Navy would be hopelessly outnumbered. Keeping open the lines of communication depended almost entirely on (1) air superiority; (2) success by the U-boats waiting to ambush the battle-ships; (3) success of the minefields on the flanks of the lanes; and (4) coastal artillery support.

### The Luftwaffe

To cope with the vital rôle given the Luftwaffe in Operation Seelöwe, by August Goering had concentrated Luftflotten II and III at airfields in north east France, Belgium, Holland and northern Germany for the attack on southern England, to be assisted by a large fleet from Luftflotten V in Norway and Denmark. Table 2 shows the strengths of these organisations. The fields in western France and in Norway now outflanked both ends of the British chain of radar detector stations. (More detail of the rôle of the Luftwaffe will be given in next month's article.)

### Airborne forces

In June 1940 Germany had two regiments of paratroopers (7th Flieger-Division) but both had suffered heavy losses during the invasion of Holland and there were probably no more than 5,000 paratroopers available

Continued on page 86



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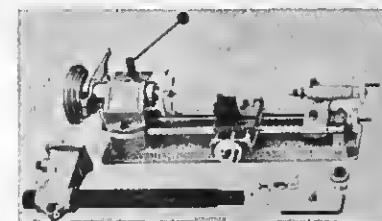
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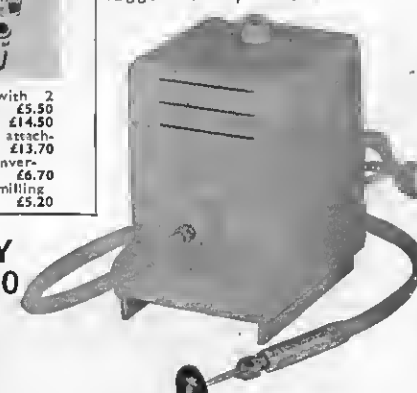
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that summer. There were also about 11,400 fully trained airlanding troops (22nd Airlanding Division). Of these forces probably no more than 15,000 could have been flown to England because of the lack of appropriate aircraft — Ju 52s and DFS 230 gliders. (The Ju 52 carried 18 fully equipped paratroopers and was also used to tow the wooden gliders, which required very little landing space. The glider held the pilot and eight men, the latter able to charge forth with guns blazing immediately on touch down, covered by a MG34 mounted in the glider.)

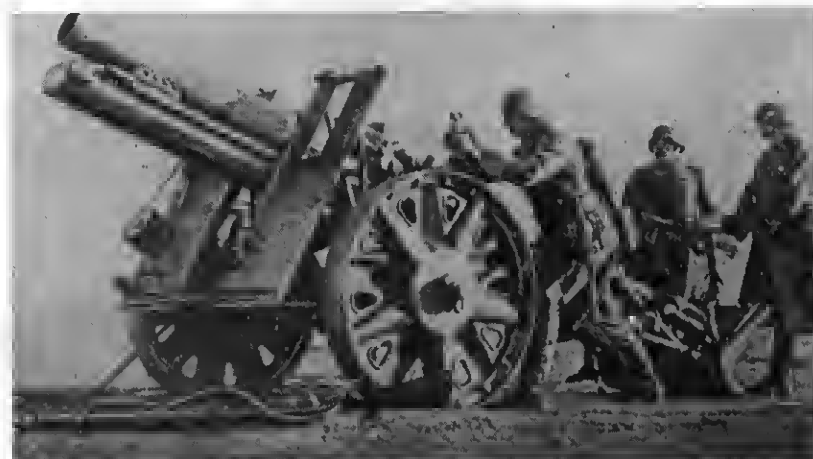
On July 11 there were available only 400 Ju 52s and 110 gliders: by the 16th this had been increased to 1,000 Ju 52s and 150 gliders (75 per cent operational). There were also 52 Ju 89-90 transports capable of carrying between 40 and 50 fully equipped men or 7,700 lb of cargo — which would mean light artillery. This meant the entire paratroop division, with mortars and other equipment, could be dropped in one go, followed almost immediately by part of the airlanding division, the remainder following in a second wave about three hours later. Heinkel 59 seaplanes were used during the invasion of Holland, and might well have been used against England. These planes could hold 12 combatants and were landed on each side of bridges close behind the enemy front: 12 such planes could land sufficient men to hold a vital bridge until the assault troops reached them.

Special airborne units were allotted important targets, such as the seizure of harbour installations and fortifications as detailed in the German invasion plans. One of the more unusual schemes was to seize the Royal Family — an attempt had been made to seize Queen Wilhelmina of Holland on May 10. First the A/A and other defences round Buckingham Palace were to be dive-bombed, then 400 paratroopers with machine-guns and mortars would be dropped round the palace to prevent reinforcements arriving and the occupants escaping. A hundred paratroopers would then be dropped in the palace grounds and a special team of 23 SS officers would seize the King and family — who were at Buckingham Palace throughout the invasion period. (A palace guard known as Coats' Mission, after its commander, Lt Col Coats, protected the Royal Family at this time. It consisted of a company of Coldstream Guards with motor coach transport, two armoured cars from the 12th Lancers and two more from the Northamptonshire Yeomanry.) Other groups were to take Scotland Yard and the Whitehall offices to prevent valuable documents being destroyed, and to land on the Isle of Wight, where all known Fascists had been interned. (These schemes would probably have been launched when the panzers began their thrust towards London.)

The Brandenburg organisation (Special Unit 800), which had a strength of four companies in the summer of 1940, would also have been used behind the British front line, as it had been during the invasions of



**Above** 7.5 cm close support gun for infantry, with wooden spoke wheels. In effect a small howitzer firing only HE on high trajectory. Weight 880 lb, weight of shell 14.25 lb, max range 3,900 yards (Terry Gander). **Below** 15 cm heavy infantry gun, the standard infantry support weapon. The gun fired an 83.6 lb HE shell. Max ranges 5,140 yards (low register), 3,117 yards (upper register) (Terry Gander).



Poland and France. English-speaking Brandenburgers would probably have assisted in the capture of Dover's port facilities and fortifications by bluffing their way into vital positions, and 100 men were to have landed with the assault troops in the Hastings area. Wearing British uniforms or civilian clothes and speaking perfect English, these infiltrators would have been able to create havoc immediately to the rear

of the British front line positions, already thrown into confusion by the capture of vital objectives by the paratroopers and airlanding forces. □

I would like to thank Max Hundleby for permission to use material on the U-tanks, first published by him in the MAFVA journal. T.W.

**Table 2**  
Luftwaffe aircraft strengths

	August 10		September 7	
	Total aircraft strength	Serviceable aircraft	Total aircraft strength	Serviceable aircraft
Luftflotten II & III				
Long-range bombers	1232	875	1258	772
Single-engine fighters	406	316	789	623
Twin-engine fighters	813	702	232	129
Twin-engine fighters & bombers	282	227	207	160
Long-range recon	65	45	153	109
Minelayers & short-range recon	90	?	61	42
Luftflotte V				
Long-range bombers	138	123	?	
Single-engine fighters	85	?	44	35
Twin-engine fighters	37	34	?	
Long-range recon	48	33	38	14
Minelayers & short-range recon	?		24	17

AIRFIX magazine

# Napoleonic military uniform research

A personal appraisal of some of the pitfalls by 'Men-at-Arms' editor Martin Windrow

GENERALLY SPEAKING, I try to take life's lumpy journey philosophically and light-heartedly, wandering along at my own chosen speed with a smile of vacant good-will on my face and a hum on my lips.

There are occasions, however, when the Buddha-like calm for which I am justly famous gives way to an enpurpled rage and the very real danger of physical violence. These storm-clouds in the sunny sky of life usually blow up immediately after some smug armchair uniform expert has lightly tossed aside some piece of research written or edited by yours truly, with a pitying smile and the languid remark that 'of course, you've made a mistake there, old man; ALL Ruritanian Horse Marines wore blue breeches piped with half-inch pink welts during the years 1803 to 1807...'

If there is one misconception that bedevils historical uniform research more than any other, it is the widespread belief that one can ever safely apply such words as *all*, *always*, *never*, *none* or *absolutely* confirmed to any alleged uniform practice of any period, and particularly the Napoleonic area. Certain facts should be borne in mind, like a filter, by any reader crouched over the latest addition to his reference shelf. Most serious writers on this subject specifically invite this attitude, and none can seriously object to it. The facts are these.

There are, simply, very few genuine eyewitness drawings, paintings or descriptions of early 19th Century uniforms. There are very few actual surviving uniforms. Most reference is based to a greater or lesser extent on reproductions, which vary in integrity and academic responsibility. Secondary sources are always slightly suspect, and should be tested as far as possible. Even primary sources should be examined with some reserve, and their provenance investigated where possible. One can never generalise from the particular. The great majority of uniform reference paintings represent the best guess of the originator; given the amount of primary data available, this is quite inevitable, and entirely respectable provided it is presented as a best guess, rather than a dogmatic assertion.

When considering the written evidence of uniform regulations, it is also most important to bear in mind the logistics of the Napoleonic age. There was no such thing as a universal pattern Model 1813 anything, mass-produced to accord exactly with a sealed pattern supplied by central government. There were reasonable approximations, produced by local factories with government contracts, betraying slight variations in the availability of cloth weights and textures, different dye batches, and even

local customs of craftsmanship. These items can be said to have been ordered in, say, 1813, which may be the date on the government authorisation; but to assume that from that day onwards every soldier in a large army, possibly scattered over a huge area of the world, immediately discarded his Model 1811 whatever it was, and received an issue of 1813 whatever it might be, is arrant nonsense. Life simply wasn't like that.

Consider, say, the French Army and the coattee usually referred to as the *habit-veste* of 1812. In 1812 the new short style was authorised, true; but in that year the French Army was scattered from Central Spain to Moscow. We know that in many places large formations were desperately short of food and ammunition, that communications were so precarious that huge escorts were required to ensure the safe passage of couriers, that thousands of wounded were sometimes abandoned to the enemy for lack of waggons, that men sometimes fought in rags and clogs. Is it really sensible to imagine that under these conditions some vast wagon train would appear out of the rain and powder smoke at the headquarters of every regiment, commanded by an impassive official of the quartermaster branch demanding that someone sign his chit for 3,000 new uniforms?

One of the 'Bourgeois of Hamburg' paintings showing men of General the Marquis of la Romana's Independent Spanish division, sent to northern Germany as a token gesture by Napoleon's Spanish allies. This picture shows grenadiers and a pioneer (left) of the Zamora line infantry regiment. The white coats are faced black, except for puzzling brown collars. The grenadier and pioneer bearskins are black, and the pioneer's apron is black with fancy yellow pockets. Note that the centre figure has his black, red-plumed bicorne slung under his goat-skin pack; and also the blue and white 'window pane' pattern trousers.



If you have a genuine contemporary water-colour of a Corporal of Ruritanian Horse Marines at Saragossa in 1809, all it tells you is that this was the uniform of a Corporal of etc, etc, — not that the whole regiment wore that uniform at all times between 1806 and 1815. If you also had another four sketches of equally solid provenance from 1806, 1811, 1813 and 1815, all showing the same dress; a set of printed uniform regulations which specified exactly that uniform from January 1 1806 onwards, with an appendix suppressing it in December 1815; a surviving uniform worn by a known man in a known campaign preserved in a museum, matching the sketches and regulations exactly; and a couple of oil portraits of officers painted by private commission, and showing exactly the same uniform; then, and only then, could you dare to go into print on the subject of the Ruritanian Horse Marines with bold, unqualified statements using words like *all*, *never*, and so forth.

One of the most important sources of genuinely contemporary uniform information of the Napoleonic period is the hand-coloured volume entitled *Uniformen aller in Hamburg zwischen 1806 und 1813 gewesenen Truppen*, of which only three copies are known to exist today. It is the work of two brothers, Cornelius and Christian Suhr, who prepared the illustrations on the spot as various formations of troops passed through their home port; it is popularly known by its French attribution, the 'Bourgeois of Hamburg'. Having spent some time and no little spleen in the paragraphs above in demanding a more rigorous scientific approach to the assessment of uniform data, I must

Continued on page 90

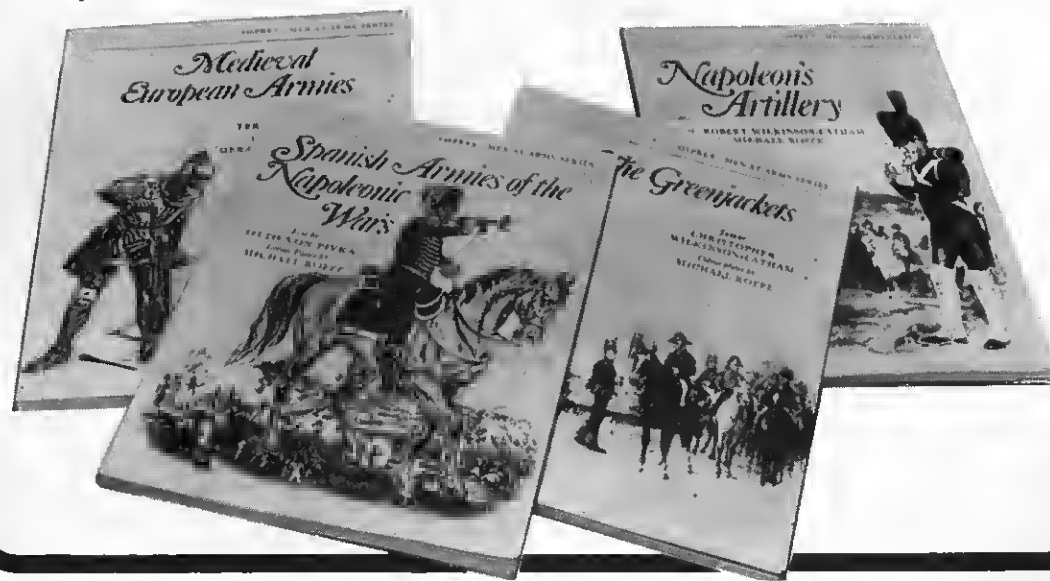
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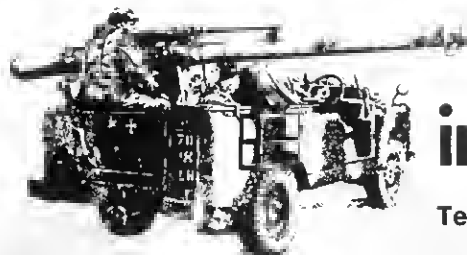
Continued from page 87

immediately come clean and admit that apart from its respectable provenance this document convinces me largely because it looks and feels right. This is an almost indefinable point, but surely valid; it is based on reading of contemporary accounts, study of other contemporary evidence, and sheer hunch. There are so many individual touches in these Suhr paintings that it defies belief that they could be fictional. There are Spanish soldiers with umbrellas; there are grenadiers with regulation tunics but loose trousers made from cloth with a blue and white checked or 'window-pane' pattern. Some of the figures have a slightly cartooned appearance which simply shrieks 'painted from life!'

Readers who are interested in this sort of primary evidence will have an opportunity to study it for themselves with the appearance of the title *Spanish Armies of the Napoleonic Wars*, by Otto von Pivka, in the Osprey Men-at-Arms series which, by a strange coincidence, I have the honour to edit. That a title built around such important sources should be the subject of a certain amount of celebratory fizz as the 50th title in the series gives me no small pleasure; but as always, we are perfectly prepared for questions, contradictions, and arguments from readers who think their interpretation of the known evidence is superior to ours, and we wouldn't have it any other way.

The monochrome illustrations in the book include a number of reproductions of the Suhr paintings, together with other contemporary prints which the author compares and assesses; and the reference from which Mike Roffe prepared his colour plates is built around these same sources. The illustrations are supported by a fact-packed text with much supplementary tabular information, and a lengthy extract from the passage about the Spanish army of the day written by the greatest British historian of the Peninsular War, Charles Oman, whose prose is both elegant and informative. We repeat, nobody is infallible, no interpretation of evidence is unchallengeable; but it would be pointless to deny our hope that this 50th book in the series will be well received.

The publishers are underlining this hope by organising various knees-ups, functions, caelidhs and indabas to mark the occasion, including a model painting competition in conjunction with Hinchliffe and Campaign Colours. Hinchliffe are bringing out a new series of 25 mm, 30 mm, 54 mm and 75 mm metal castings of Spanish personnel based on the same references as the paintings in the book, and Campaign Colours are producing a special set of suitable paints. There will be various mouth-watering prizes for the best models, which will be judged at the Northern Militaire Exhibition at Swinton, near Manchester, on November 8-9 this year. Details of this competition can be found on pages 88-89 of this magazine. Judges will include the editor of *Airfix Magazine*. If Napoleonics are your bag, why not enter? Some of those yellows and purples are positively voluptuous... □



## in the field

Terry Gander

### The Royal Engineers

THERE CAN BE little doubt that the Royal Engineers are one of the five most important branches of the British Army, the other four being the Royal Armoured Corps, Royal Artillery, Infantry and the Army Air Corps.

The Royal Engineers have a wider range of roles in wartime than almost any of the other Corps. These include laying minefields, lifting minefields, bomb disposal, building and repairing airfields, bridge building, demolition, road repair and road making, to name just a few. In peacetime they have assisted in numerous civilian projects.

They have a wide range of equipment to enable them to carry out their role, ranging from the Chieftain bridgelaying down to small boats and power tools.

The latest piece of equipment is the new Combat Engineer Tractor. This has been developed by the MVEE and built at the Royal Ordnance Factory in Leeds. Prototypes are now being tested and the vehicle could well be in service in three years time.

The CET is fully amphibious, being propelled in the water by waterjets at a speed of five knots. Its top road speed is 34 mph. It can be used for a wide variety of roles including a bulldozer for digging weapon pits, laying trackway and as a towing vehicle. A small crane can be quickly erected if required. A rocket propelled earth anchor is provided so that it can haul itself out of rivers should it become stuck.

The Centurion bridgelaying has now started to be replaced by the Chieftain

Two views of the new FV 180 Combat Engineer Tractor, shown firing its anchor and hawser in the lower photo (MoD).



Above Vehicles of 52 Field Squadron (Airfields) carrying out runway repairs at RAF Wildenrath. Below Chieftain bridgelaying.



AVLB. This can have either a Tank Bridge No 8 which is a scissors bridge capable of spanning gaps of up to 23 m, or the Tank Bridge No 9 which can span gaps up to 12 m. Both bridges are class 60 which means that they can take a fully loaded Chieftain MBT. The Centurion AVRE (Armoured Vehicle Royal Engineers) remains in service for the present time.

The latest minelayer to enter service is the Bar minelaying system. This lays the Bar anti-tank mine either on the surface or underground at the rate of 500 mines per hour. The Bar minelayer can be towed by a truck, an FV 432 or a Stalwart High Mobility Load Carrier.

The Ranger anti-personnel minelaying system is still in the development stage. This has been developed by EMI and can be mounted on a variety of vehicles including the FV 432.

For clearing minefields the Engineers use the Giant Viper mine clearing device. This is mounted on a trailer which is towed by the Centurion AVRE or an FV 432. It fires an explosive hose over the minefield, which falls on to the minefield and is detonated, hopefully clearing a path through the minefield.

A wide variety of tractors, both wheeled and tracked are used by the Engineers. Most of these are civilian vehicles modified to meet Army requirements. They range from the Muirhill A5000 Light Wheeled Tractor up to the Heavy Michigan 275 Wheeled Tractor. Other equipment includes scrapers, graders, excavators and a wide range of road making equipment.

The Royal Ordnance Factories have also designed and built the Eager Beaver Rough Terrain Fork Lift Tractor. This has been specially designed for moving pellets of supplies and ammunition in the field. It is powered by a Perkins diesel which gives it a top speed of 40 mph on roads. Another special vehicle is the Light Mobile Digger. This can dig a trench two feet wide and 4.6 feet deep at 15-18 feet per minute. It is based on a Nubien chassis and has a top road speed of 44 mph.

To carry their heavy plant the Royal Engineers use a variety of trucks and semi-trailers, the most recent being the Scammell Crusader tractor with the Crane-Fruehauf semi-trailer. Their latest dump truck is the Aveling Barford 690 which can carry 7.5 cubic metres of soil. Other standard vehicles used by the Engineers include the Lend Rover, Bedford trucks, FV 432, Stalwart, Ferret and the Scimitar CVR(T) will enter service in the near future as a reconnaissance vehicle.

The three main types of bridging unit used are the M2 Amphibious Bridging Unit which is used by a number of NATO armies, the Medium Girder Bridge and the Class 16 Airportable Bridge. The Medium Girder Bridge has sold all over the world, including the United States. The Class 16 bridge can be adapted for use as a powered raft or a floating bridge, in addition to its basic role as a bridge.

There can be little doubt that the Royal Engineers have some of the best equipment of its type anywhere in the world. □



## british army uniforms 1660-1900

### The first light cavalry by Bryan Fosten

DURING THE Jacobite Rebellion of 1745 the Duke of Kingston raised his own regiment of Light Horse. The Duke planned that his unit should act in a similar way to the Hungarian light cavalry (hussars) which were being absorbed into the cavalry arms of many of the other major European powers.

Mounted on small horses, Kingston's horse were equipped in a simplified way to facilitate swift movement in the field. For the first time in the British Army light carbines were carried slung from leather bandoliers by means of steel swivels clipped on to bars set in the stocks of the weapons.

The men were selected for their small stature and also carried pistols and curved swords in imitation of the continental hussars.

The regiment performed very useful service during the 1745 campaign, especially at Culloden, and so impressed the Duke of Cumberland that he implored his father to

allow him to command it. The short-lived regiment was disbanded the year following Culloden but Cumberland promptly raised another from its personnel which was subsequently known as the 15th (Duke of Cumberland's) Dragoons, thus becoming the first Light Dragoon Regiment in the history of the British Army.

In the collection of HM the Queen is a painting by David Morier which illustrates this corps. The painting, entitled 'Private 15th (The Duke of Cumberland's) Dragoons', indicates a blacked cocked hat trimmed with yellow and with a green feather ornament, a red coat with green cuffs and large red cuff flaps, green turn-backs and yellow metal buttons. On each front of the narrow upright collar are green cloth patches, each decorated with a button. Seven buttons are visible down the front of the coat and the large red cuff flaps are fastened with three yellow buttons on the sleeve above the short buff gloves.



The Cumberland Dragoons in 1746. The uniform and equipment looks very similar to the normal cavalry of the period. The 'light cavalry' look has yet to appear.

The trooper is carrying a musket, butt down in a leather bucket in front of the saddle. He has a buff waistcoat and breeches and wears black cuffed jack boots with buckled on spurs. The buff leather pouch is carried on the trooper's right hip suspended on a wide buff shoulder belt over the left shoulder.

The 'housing' has a sharply pointed rear corner and the holster flap is an elaborate shape with a flap. Both are green with a broad yellow lace edging with a central green stripe. In the rear angle of the housing and on each holster flap the Duke's badge is embroidered — The Lion of England within the Garter with the Royal Crown above. On the holster flaps the Crowns are placed on the flaps. Note that the trooper has a yellow cord loop on the right shoulder which suggests he may be a Corporal, and that he is wearing a black strap over the right shoulder.

The Drummers of the unit wore scarlet faced with green and with gold lace. Like its predecessor, the regiment proved successful and indeed accompanied the Duke on his campaign in Flanders where it fought with distinction at the Battle of Lauffeld. However, in the usual British conservative fashion it was considered a little too radical and was disbanded in 1748.

Thereafter, although the French, the Austrians, the Russians and most of the German states were developing the light cavalry on their establishments, the British had none. In 1755 the discrepancy became too obvious and as a result January 1756 saw the issue of the first orders relating to the raising of Light Dragoon units. However, instead of forming complete regiments it was decided to add Light 'Troops' to each of the Dragoon Guard and Dragoon Regiments as an experiment.

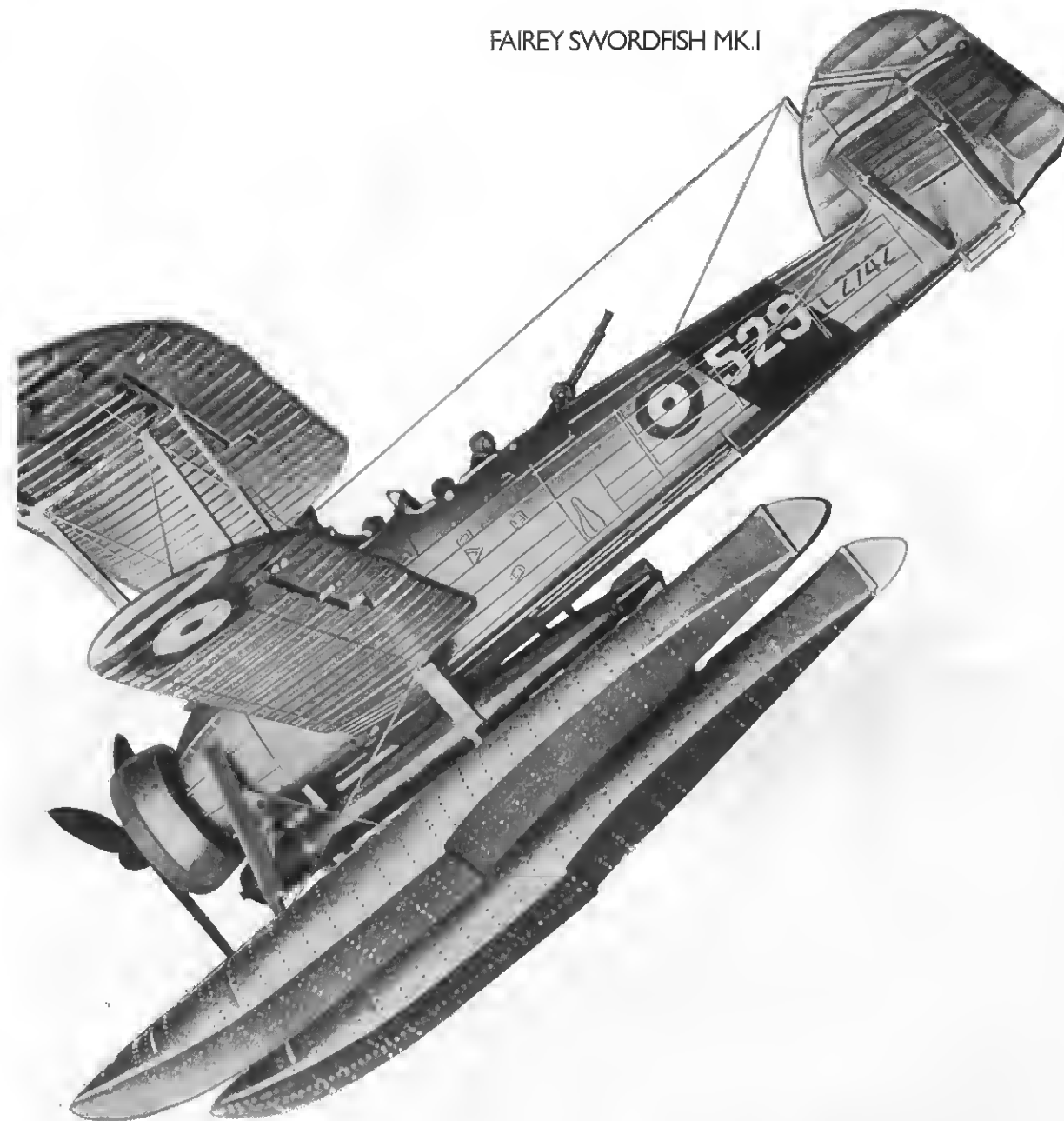
The first regiments to have these new-fangled additions to their establishments were three Dragoon Guard Regiments — the 1st, the 2nd and the 3rd, together with eight Dragoon Regiments — the 1st, 2nd, 3rd, 4th, 6th, 7th, 10th, and 11th. All were to have an establishment comprising a Captain, a Lieutenant, a Cornet, a Quartermaster, two Sergeants, three Corporals, two Drummers, a Farrier and 59 troopers. The men were selected for their agility and intelligence and were 5 feet 6 inches to 5 feet 8 inches tall and were mounted on nimble horses, each about 14 hands.

The Light 'Troops' were dressed in the same uniform as the rest of their regiments except that they had special caps called 'jockey caps'. These were made of thick blackened jacked leather with a small red painted front flap turned up and decorated with fret-cuf Royal Cyphers and the number of the regiment. The skull was reinforced with brass ribs, the central one raised to act as a crest running from the back of the front flap to the nape. On the left side was a short thick plume made of red horsehair with hair of the facing colour.

A painting by the inimitable Morier, now in the possession of the Earl of Pembroke, gives us a representation of the first of the

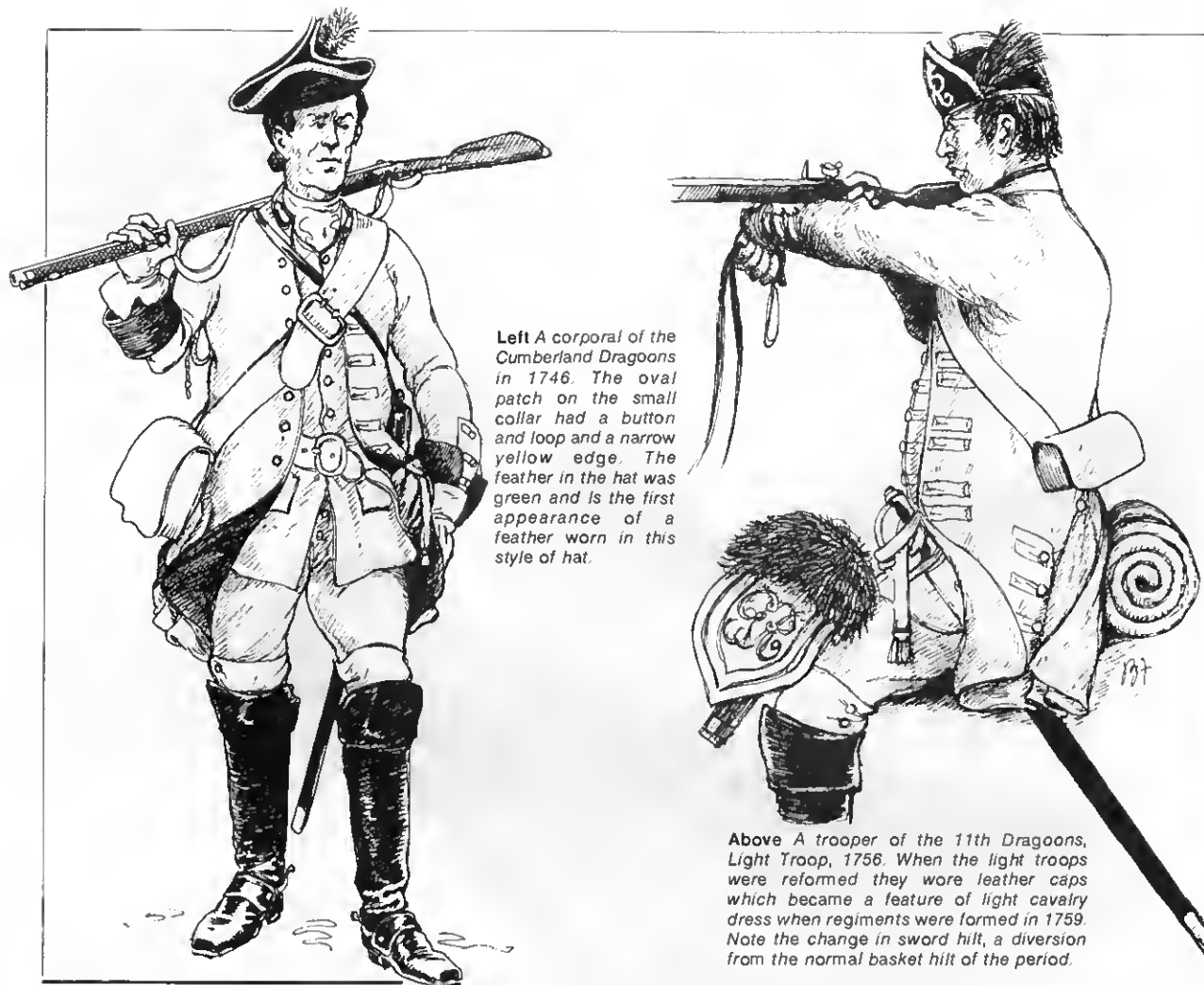
Continued on page 94

FAIREY SWORDFISH MK.I



**frog**

It's the detail that makes the difference.



Left A corporal of the Cumberland Dragoons in 1746. The oval patch on the small collar had a button and loop and a narrow yellow edge. The feather in the hat was green and is the first appearance of a feather worn in this style of hat.

Above A trooper of the 11th Dragoons, Light Troop, 1756. When the light troops were reformed they wore leather caps which became a feature of light cavalry dress when regiments were formed in 1759. Note the change in sword hilt, a diversion from the normal basket hilt of the period.

#### Continued from page 92

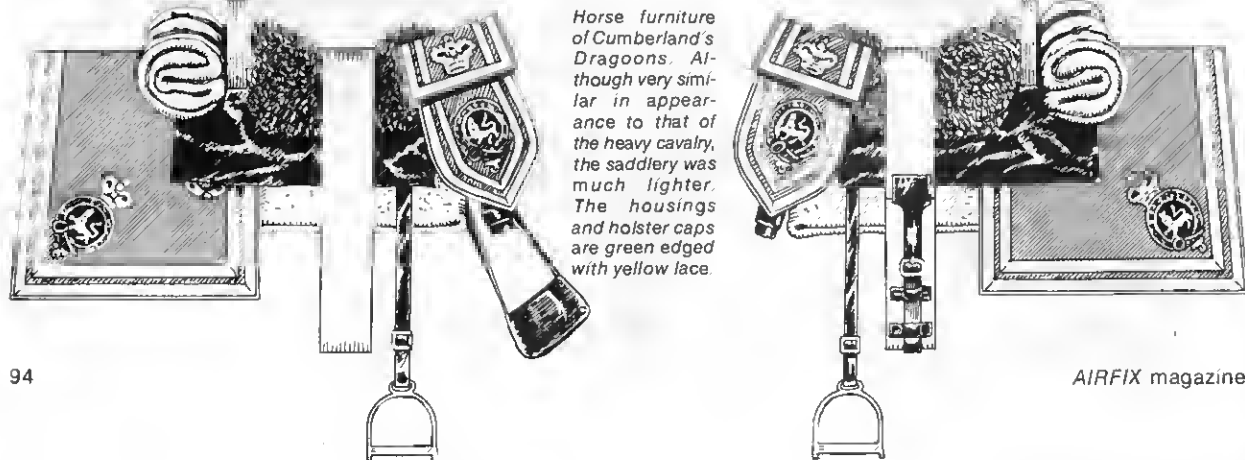
British Light Dragoons, in this case the 11th Regiment. The troopers wears the regimental coat with buff cuffs and turnbacks, waistcoat and breeches and shortish black jacked boots worn over white boot stockings. The buttons are white metal and the holes decorated with square-ended white loops. The buttons are set on in pairs. The housing and pistol holster flaps are buff

edged white with a central red stripe and embellished with the title 'XID' enclosed in a wreath which is probably meant to represent the Union of Rose and Thistle. Over the holsters is a goatskin or bearskin flounce. The trooper wears a cap which follows the authorised pattern but has a yellow edge to the front flap and a small yellow crest. The plume is whitish-buff.

The Light Trooper is equipped with a

simple waistbelt supporting a straight simple-hilted sword and a buff bandolier over the right shoulder with a small buff leather cartridge pouch on the left hip. The horse's tail is cropped. The life of the Light Troops was short lived. They became so efficient and popular that it was decided to raise complete regiments similarly equipped. The first Light Dragoon Regiment was raised in March 1759.

Horse furniture of Cumberland's Dragoons. Although very similar in appearance to that of the heavy cavalry, the saddlery was much lighter. The housings and holster caps are green edged with yellow lace.



## Harrier takes to the waves

The Royal Navy's new fighter described and modelled by Richard E. Gardner

IN MAY OF this year the long-awaited decision to proceed with development of the maritime Harrier was announced by the government. Designed to provide the Royal Navy of the 1980s with a quick reaction capability in attack and defence roles, the Sea Harrier, as it is to be known officially, seems sure to become a classic fighter of the future. It represents a convenient stepping stone to further developments in later years, and will provide a military punch out of all proportion to its physical size and numbers currently on order. At last small carriers will be able to operate a highly potent fighter without the vast complication and cost of traditional launching and recovery methods.

The Royal Navy has been backing the Harrier for several years and the initial order for 25 aircraft will enable squadrons to start forming in time to embark on the first anti-submarine 'flat top', HMS *Invincible*. Before this, however, training will start at the RAF Harrier base at Wittering and the very first

operational Sea Harriers will go to sea aboard the anti-submarine carrier HMS *Hermes*, operating alongside Sea King helicopters.

It is thought that a squadron will serve on each of the three 'Invincible' Class ships with another on *Hermes*. This would continue the policy of keeping squadron numbers for each flying unit, as with the Sea Kings, rather than allocating flights from one big squadron as is the case with the Wasp and Wessex helicopters which reside singly on frigates and destroyers. In view of the fact that the Fleet Air Arm's Buccaneers and Phantoms will be transferred to the RAF by 1980 it is possible that the numbers of the most famous naval squadrons will be allocated to Sea Harrier units. We shall have to see.

The Sea Harrier FRS Mk I is based directly on the RAF's GR Mk 3 Harrier in order to minimise the cost of the total programme. Although it shares about 90 per cent of the airframe with the standard Harrier, the Sea

Harrier is a very greatly improved all-rounder. Unlike the land-based GR 3 and AV8A (which does go to sea with the US Marine Corps), the FRS1 is not designed primarily to attack land targets on close support missions. Its main functions are air defence and surface strike. In peacetime its prime duties will be over-the-horizon reconnaissance, feeding the fleet with up-to-date intelligence, and investigating and 'seeing-off' Soviet long-range maritime aircraft. In order to carry out these demanding tasks the Sea Harrier will feature an advanced radar in the nose, a larger cockpit for better combat visibility, and the provision of more space for equipment, and will be armed with cannon pods, bombs, rockets and air-to-surface and air-to-air missiles, as well as sonobuoys and flares.

In due course the US Marine Corps and the US Navy may follow the Royal Navy and build several hundred Sea Harriers with the designation AV8B or AV8C, (AV8 PLUS), possibly with an up-rated engine and larger wing with a supercritical design.

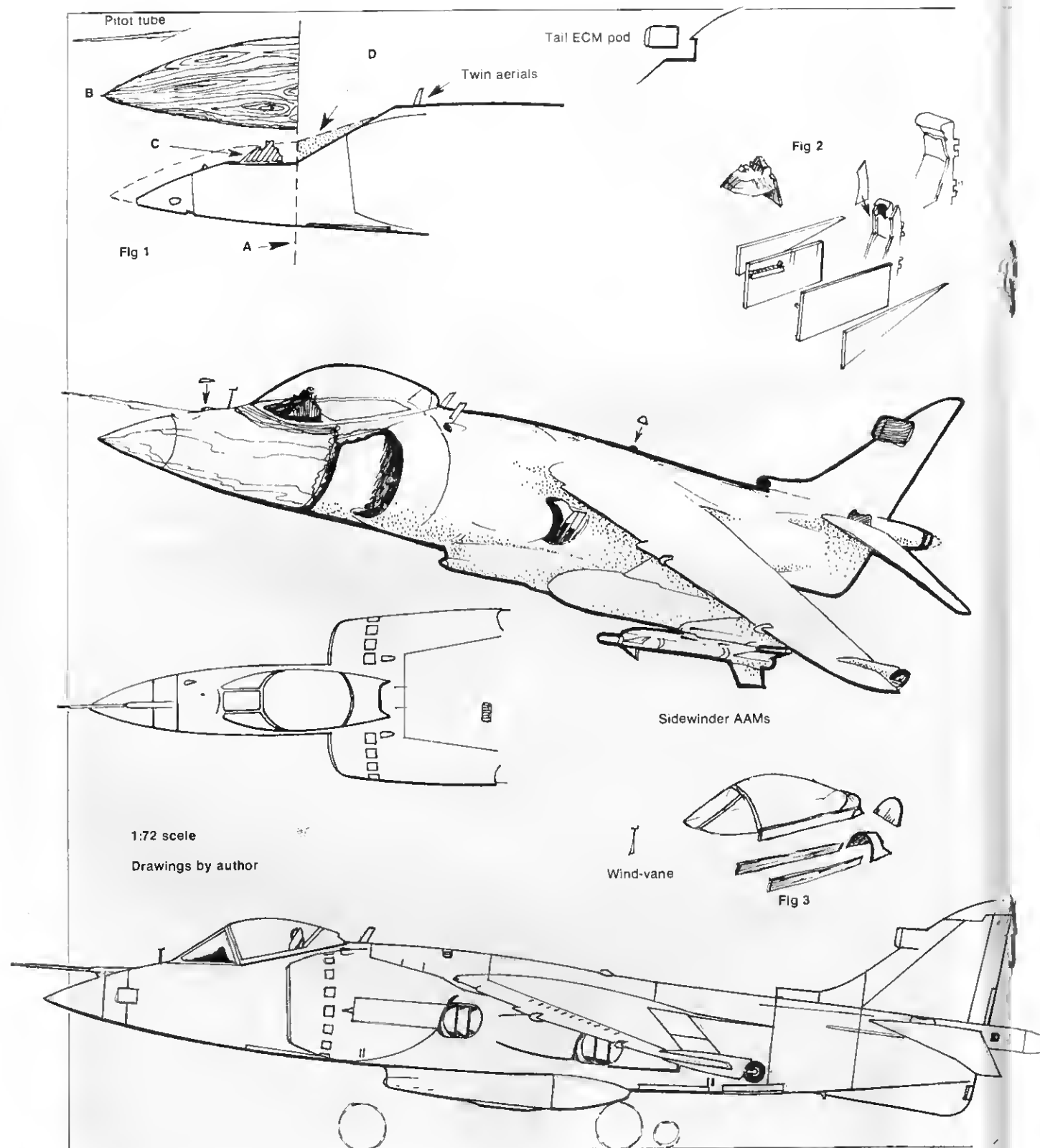
#### The model

It is some time before the Sea Harrier is due to enter service, but modellers who have already built examples of the P1127,

An artist's impression of a maritime Harrier flying over HMS *Invincible* (MoD).







GR1, GR3, AV8A and T2 may very well consider adding this latest member of the 'family' to their collections as it is bound to be a focal point of interest, and unlikely to become available as a normal kit for several years.

The conversion from the standard Airfix Harrier is quite easy though patience is required if the result is going to compare with a model made up 'straight from the box'. There are alternative methods of converting plastic models and my own Sea Harrier uses a mixture of plastic card, body putty and balsa wood. This combination was found to be most suitable for the subject although others may prefer to vacuum mould the new nose in order to make their models comply with the 'all plastic' rule that applies in some competitions!

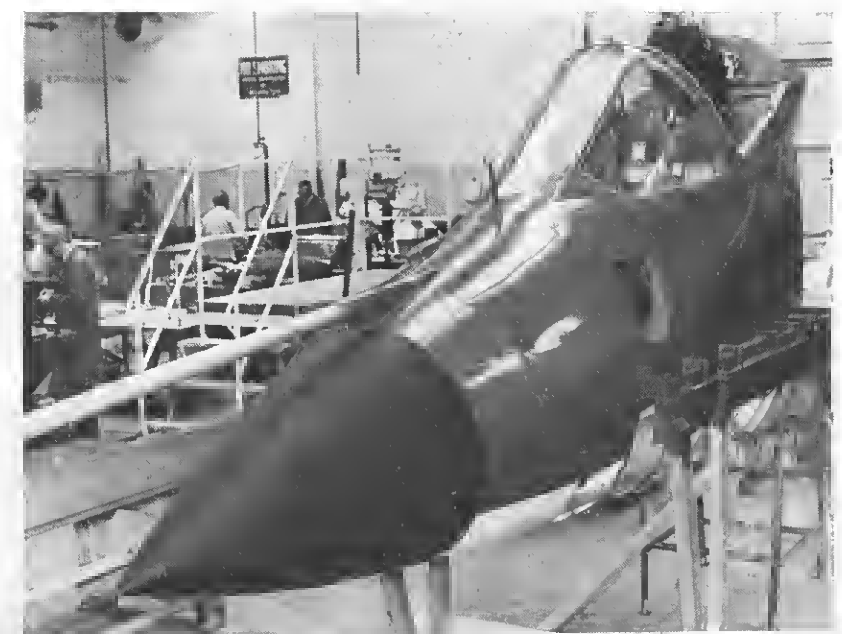
The drawing was scaled up from an official Hawker Siddeley three-view plan and formed the basis for the model.

### Fuselage

The kit instructions were followed for the assembly of the rotating nozzles and the main intake fan (Items 1 - 16). The nozzles were thinned down carefully with a craft knife and the edge of the fan sanded so as to look less like a cartwheel! The intake interior was painted white with silver fan.

After the fuselage had been firmly cemented together and left to dry the nose section was cut away as shown in Fig 1 'A'. After cutting with a fine hacksaw do not file away the rough edges as the finished surface may be damaged. The 'opened out' edge left after cutting provides a good surface for the balsa nose (Fig 1 'B'). Use plenty of traditional tube cement, for the surplus can be filed away later.

Fig 2 shows the plastic card components used in building up the new canopy area. The top of the instrument panel can be cut from the discarded nose section and extra details added (Fig 1 'C'). This should be painted matt black, as is the ejector seat, with the other interior details black on light grey. As the pilot figure in the Airfix Harrier



is particularly well detailed, I decided to place him in the cockpit. In order to make him fit his legs were amputated below the knee and his left arm was bent up in a waving gesture! By placing the pilot in the aircraft most of the interior detail is lost, but you can't have it both ways!

Before removing from the kit sprue the figure was painted. His slate grey/green overalls were adorned with yellow mae-west, black face mask and visor, white bone-dome and badges on the shoulders. The final detailing involved painting a maritime beard on to his visage, though standard RAF-style 'clean face' could apply as the squadrons will be jointly manned by both services. Extra canopy shattering shields were fitted on to the ejector seat which was carved as illustrated in Fig 2.

The area marked 'D' in Fig 1 is plastic card and can be rubbed down to blend with the fuselage when completely dry. The intake sides (kit parts 22 and 23) should be

left off until all the work on integrating the new nose has been finished. The canopy provided in the kit cannot be used as it is too shallow. A new canopy can be moulded from acetate sheet using the usual wooden former method, or the spares box can be searched. I used the canopy from an old Frog Sea Hawk model modified with thin plastic card as shown in Fig 3, but several kits could provide a suitable shape, even though it might be necessary to cut the front screen from the Airfix canopy. Luckily

Completed model with Martels inboard and Sidewinders outboard.



October 1975



the Sea Hawk canopy (being from the same Dunsfold stable) is very close to the Sea Harrier.

The pitot tube and wind direction vane (Fig 3) are made from stretched sprue. It may not be worth adding the letter in 1:72 scale as it is so tiny it will almost certainly break off in due course. (That's why it is missing in the photographs.)

When the canopy has been added and the join built up with body putty the nose can be rubbed down. It was found that the best result could be obtained by covering the entire nose area with putty before rubbing with very fine sandpaper. After this had been done and the nose had acquired a good round cross-section the entire area was painted with a thick mixture of talcum powder and gloss varnish. When this had become quite dry (the next day) the fine wet and dry paper was used again, until the finger could no longer feel any joins.

The radar warning pod and taileron shield are added from plastic card and the anti-collision beacon from a piece of stand (painted red). The twin eerials are added last of all to prevent accidental damage.

The shape of the tail cone is different to that of the standard Harrier and should be cut down as illustrated.

When the fuselage is complete it can be painted as the high wing makes this operation difficult if left until the wings have been added. Clean demarcation lines can be obtained with the aid of masking tape.

#### Wings and tail

The wings should be painted before any underwing stores are added. A neat alteration is the modification of the inner flaps to allow them to operate. This involves scoring the lower hinge line and cutting through the upper hinge completely.

Above Harrier G-VTOL on the deck of the assault ship HMS Fearless at Greenwich recently  
Below New cockpit and balsa nose in place. Bottom Completed model with standard Harrier kit fuselage for comparison. Note discarded nose section.



#### War loads

The Airfix kit provides a fine selection of flares, pods, bombs and rockets, which can all be used on the Sea Harrier. A more representative load can be built by utilising spare Sidewinder missiles (plus pylons) from the spares box (Sabre, F5, etc) for the outer positions and ASMs inboard. The Martel (radar version) might be carried in the anti-shipping role and this can be obtained from the Frog Buccaneer or Jaguar kits. New pylons will have to be built from plastic card.

#### Painting and finishing

The standard Fleet Air Arm fighter finish is Extra Dark Sea Grey with white under surfaces and the Sea Harrier is expected to be similarly painted. It is possible, however, that overall grey will be applied as with the Buccaneer (and RAF Harriers are now being camouflaged on the under surfaces), but all official drawings, and the HSA mock-up, depicts the Sea Harrier in a two-tone finish, which looks very smart. Red/blue roundels are more likely than 'D' type.

The effect of Extra Dark Sea Grey on a small model is overpowering as colour intensity appears to increase in inverse proportion to size. Hence the danger on placing too much importance on 'exact' colour matches when completing a model. If a modeller attempts to match a model exactly with a real colour chip then the model inevitably looks too dark. My own Sea Harrier is painted semi-gloss Dark Sea Grey to match other modern naval models, and the result is far more life-like than would be the case if Extra Dark Sea Grey paint was used straight from the tin. Try it and see! Under surfaces were spray painted using a Humbrol aerosol can (see reviews, September issue). Two thin coats were sufficient to provide a very clean finish and missiles were painted on the sprue.

When the Harrier is parked, its wheel doors hang down but when the engine is running, the doors close to protect the wheel wells from foreign object damage (FOD). If a pilot figure is included it is well to remember to fit the wheel doors in a retracted position, even with the wheels down. The wheel well doors had not been fitted at the time the photographs were taken.

Small standard markings, such as ejector seat and explosive bolt triangles, can be obtained from the spare decal box and many tiny maintenance and servicing markings can be obtained from the Modeldecal range of transfers. The subject of this article has been given the colourful markings of the No 800 Squadron from the Modeldecal Buccaneer sheet. The nose has been left grey and white as it is expected that production Sea Harriers will have painted noses (special paint is used) despite the appearance of the mock-up which has a natural glassfibre nose.

If, in another 48 months' time, the first Sea Harriers should appear in a different colour scheme to that described in this article, then the modeller has only to reach for the paint tin, aerosol can or that mysterious decal box, and all is well!

## Every man for himself! Skirmish Wargaming

Donald Featherstone



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A10/75

# Von Barner's Brunswick Jäger

First in a new series of military figure conversions from Martin Windrow and Gerry Embleton

THE PURPOSE OF this short series of articles is to describe some colourful and pleasing military figure conversions, mainly from the various kits in the Airfix 54 mm Collectors' Series but with odd additions from the Historex range, Tamiya figures, and so forth, which were suggested to us by some of the research we did for our book *Military Dress of North America 1665-1970* (Ian Allan Ltd, 1973). Some will be direct three-dimensional treatments of Gerry's colour plates in the book; others will be supplementary figures from other sources.

We hope to provide at least one representative figure from each of the interesting — and in some cases, little known — cam-

paigns fought in North America between the 1750s and the Indian Wars of the 1870s and 1880s; if these articles encourage modellers to do their own research and go further into this dramatic area of military history, so much the better. We shall make it a point to suggest possible diorama ideas, and intend to cast the net wide enough to include some figures more remarkable for their character than for their parade-ground appearance — but more of that in later articles.

To kick off, we have chosen a figure which is relatively simple to make using parts of Airfix US 1775 Infantryman and French Imperial Guard Grenadier kits, with a spare Baker Rifle from a 95th Rifleman kit.



Completed model of von Barner jäger. A very similar uniform was also worn in America by the Hesse-Cassel Jägercorps — details may be found in *The British Army in North America 1775-83*, by Robin May, Osprey Men-at-Arms series. Diorama modellers could mix this unit with British light infantrymen in cut-down coats and caps; all Burgoyne's infantry wore cropped uniforms. Burgoyne also used Indians for scouting, and this may suggest several lively and unusual groups which could be set up in 'forest' scenery — including the axed stumps and fallen trunks of trees — since Burgoyne's men often had to hack waggon roads through thick country. Food was a constant worry, and no doubt the soldiers of the column hunted game for the pot, suggesting amusing animations for your figures. A few hours' reading to get the atmosphere of a campaign often provides such details, which pay dividends in really individual and striking models.

It is also topical, in that it depicts a soldier of the War of Independence, currently the in-topic in militaria circles and likely to remain so for months to come.

## Jäger, Brunswick Light Infantry Battalion von Barner, 1777\*

Brunswick was a traditional ally of the Hanoverian kings of England, and in 1776 the two countries signed a treaty by which Brunswick supplied a corps of 4,000 men for service in America against Britain's tire-some colonists. These generally first-rate troops formed a large part of General 'Gentleman Johnny' Burgoyne's ill-fated expedition of 1777, in which he led some 7,500 men south from Canada towards Albany. Other columns were supposed to rendezvous with Burgoyne, thus cutting the rebel territory into several separate pieces; but the co-ordination of the campaign was hopeless, and Burgoyne — although far abler than he is generally given credit for being — had underestimated the supply problems of a contested march through the great trackless forests of the north. Harried, ambushed, drawn deeply into areas where the rebels were strong, increasingly short of food and ammunition, Burgoyne was eventually forced to surrender at Saratoga. By the time of the capitulation in October the Brunswickers had lost more than 1,000 men.

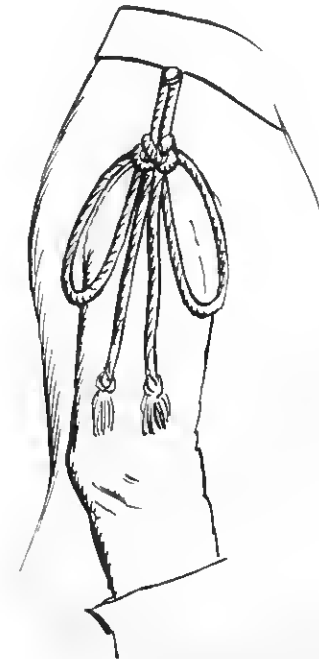
One of the best Brunswick units was the Light Infantry Battalion von Barner, named after its commander and consisting of four light and one jäger companies. It had been raised among the foresters and hunters of the Duchy, men who adapted quickly to woods campaigning, and who were expert shots. Our model depicts a jäger.

The head from the 1775 Continental soldier kit may be used unchanged. The arms can come from any spare parts you have handy, depending on the animation required. File off the cuff detail end slim down the wrists with knife and file. The jäger wears a pair of gauntlet gloves, and these can be made easily by cutting the cuff section from plastic card of the thinnest grade and cementing it at the wrist. It would probably have the cuff split up the rear seam (ie the seam in line with the little finger), so cut your card accordingly. Make sure that before you cement it on, the figure's forearms are sharply tapered inward to the wrist, allowing the gauntlet to take a natural shape when in place.

The coat from the Continental soldier is used, with some quite drastic filing and trimming. Firstly, file the pocket detail right down; the coat should have a simple, unpiped three-point horizontal pocket. Remove the loop detail in the small of the back. It is probably correct to remove the heart-shaped clasps from the turned-back coat tails — a simple stitched or hooked junction is more likely for these troops.

The lapels are a big problem. They are moulded too narrow, and the buttons are too big. It is up to you whether you decide to

\*See *Military Dress of North America*, Fig 20, Plate 4.



Possible reconstruction of the aiguillette worn on the right shoulder. Officers were dressed like their men, but with silver aiguillettes and sword-knots.

be a perfectionist and file them away completely, replacing them with wider strips of curved plastic card, or whether you rely on careful painting to correct the impression. We took the easy way out, and merely corrected the length and the button placing. First, scribe a line across the lapels below the ninth button from the top — ie above the second from the bottom. File or carve away the lapel below this point, smoothing the surface to the level of the rest of the coat. Now, again counting from the top, cut off the second, third, sixth, seventh, and eighth buttons. This leaves one at the junction of collar and lapel, two together in the middle of the lapel, and one at the bottom.

The jäger wears thigh-gaiters, not the stockings and half-gaiters of the Continental Infantryman kit, so we used the legs of an Imperial Guard Grenadier. The marriage of legs and torso calls for care, because the Grenadier's stomach rises to a sharp 'prow' at the front — this must be carved and filed down. Keep offering up the two assemblies until you like the look of the fit. You will probably have to clean up the join with filler and a file, but no matter — it is going to be hidden anyway.

A belt passed under the coat and over the waistcoat supporting a big leather cartridge box in front of the stomach; simply cement this in place, using either the box from the Continental kit as it comes, or with the flap trimmed straight along the bottom if you like. Only a tiny section of 'belt' will show, on the right, and this can be suggested by painting. The jäger wears a hunting sword or hirschfänger frogged from the belt on his left hip, just showing in front of the coat

skirts. We used a discarded Baker bayonet scabbard, with the stirrup-hilt from a spare cavalry sabre from the parts box. The sword can be cemented direct to the outside of the thigh. A sword-knot of plastic card, thread, or twisted fuse wire should be added to the hilt.

To re-cap; we now have the trimmed coat assembled to the new legs, the head in place, the cartridge box and sword fitted, and newly-gauntleted arms waiting in the wings to be cemented in place when the painting scheme allows it (and it goes without saying that with this, as with all figures, the sequence should be planned to allow ease of painting. Always look ahead, and never cement an arm in place without asking yourself what you are going to have to cement, or paint, under it later on!).

Now for some 'fine tuning'. The pose we selected was as shown in the photos — he is priming his rifle from his powder-horn, preparatory to sending a ball through some insolent rebel who thinks himself quite safe up a tree three hundred yards away! Satisfying ourselves that we could fit the rifle later on without difficulty, we added the arms and let them dry. A single, simple shoulder strap should be added to his left shoulder with plastic card.

An aiguillette was worn on the right shoulder by all ranks — it looks difficult to make, but isn't, if you use fuse wire. The sketch shows the design of this decoration. Take a piece of the thinnest gauge fuse wire about eight inches long, double it in two, end then twist firmly with a pair of pliers or tweezers at each end until the whole length is evenly twisted into 'cord'. Double it again, squeezing the strands close together at the 'V', and then form your loops round a pencil or other implement; the length of doubled cord which lies along the shoulder is about an eighth of an inch long, the loops are about 1/4 inch across, and the ends hang just a bit longer than the loops — say 3/8 inch. Push it around a bit until it 'hangs' naturally, then cement in place with an epoxy adhesive sparingly applied. Leave to dry thoroughly before final adjustments to the hang.

This leaves the rifle, powder-horn and canteen to add. The canteen can be used straight from the Continental soldier kit, on a plastic card strap round the body. The rifles used by the jägers were not uniformly issued — they were personal weapons, sometimes finely decorated presentation pieces. The Baker Rifle must be your basis for this weapon, and you could get away with using it straight from the kit, disguising it a bit with paintwork — often these weapons had fancy cut-out brass patch box lids in the butt, or you could build up an elaborate cheek-rest on the butt with filler, or even simulate silver or brass chasing along the fore-stock. We happened to have a broken Baker in the spares box, so used the rear half of that with a new and slightly lengthened fore-end from an old musket, with the muzzle cut off blunt-nosed. The sling should be fairly loose.

As for the powder horn, we could think of no quicker way of making one than the slow, hard graft of carving from scrap. A



spare, bent arm in the spares box was butchered, and using the elbow joint and a bit of length on either side we carved and filed it to shape, fitting a ring in the middle of the flat 'plug' at the thick end and simulating a nozzle at the thin end before adding a slinging cord from the left-over twisted wire.

## Painting

**Complexion and hair** Fair, Germanic colouring, blue eyes. **Hat** Matt black, with gloss black cockade, white loop, silver button. **Shirt** White. **Stock** Black. **Waistcoat** Dark green, silver buttons. **Coat** Dark green, with deep crimson collar, lapels, and deep cuffs. If they show in the split at the rear of the gloves. All buttons silver — four on each side of the facings, three on each pocket flap, one on each shoulder, two on the rear in the small of the back. **Breeches and gloves** Buff leather. **Gaiters** Dark grey, black buttons, black garter with silver buckle. **Aiguillette** White. **Pouch and all leather** Gloss dark brown. **Sword hilt** Brass. **Fist-strap, and powder horn cord** Green. **Canteen** Natural wood. **Rifle** Deep gloss brown woodwork, dull silver or browned silver barrel and lock, other furniture brass. Appearance is much improved if you paint fine matt black lines at meeting of wood and metal parts, and around details of lock. Wood effect and leather effect can be achieved by using matt brown, then over-painting when dry with Burnt Sienna drawing ink. **Powder-horn** Semi-gloss off-white, with grey and yellow streaks.

As always, we would remind inexperienced modellers that the model is greatly enlivened if posed with a bit of animation and set on a scenic base. This jäger fought in summer in a forest setting; by autumn 1777, with copper-coloured leaves on the ground, he would be a bit ragged and patched. Use your imagination — it pays dividends. □



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## Part 1 — Introducing the Lysander

SPECIFICATION A39/34 ended the era of requirements for biplane army co-operation aircraft. Issued in April 1935, it called for a single-engined monoplane with a wide speed range able to perform a variety of duties and carrying a two-man crew in an enclosed cockpit canopy. Two forward-firing machine-guns were needed and adequate rear defence. Dive bombing was a stipulated task for which brakes might be considered.

Three manufacturers tendered designs of which two were chosen for prototype development, leaving the Hawker scheme a paper concept.

The Bristol 148 was a low wing mono-coque construction monoplane powered by a radial engine — Bristol Mercury IX or Bristol Perseus XII. A long canopy covered the two cockpits and a retractable undercarriage was fitted. Two Browning guns

L4742, the Mk II, joined No 4 Squadron on December 30 1938 and was first in action on June 2 1940. Coded TVH and wearing underwing serials and Type A1 roundels with type A beneath the wing-tips, the aircraft is shown during message pick-up training. The photo must date from mid-1939. Wheel discs appear to be yellow.

were sited in the port wing end underwing bomb racks were provided for. A radio, camera and the inevitable message pick-up hook were all included in the design. Two prototypes, K6551-6552, were ordered in June 1935.

K6551 first flew on October 15 1937 in all-silver finish with Type A roundels in the customary six positions and black serials — on the fuselage, beneath the mainplanes and on the rudder. Later it was fitted with a Perseus XII engine. K6552 first flew in May 1938 fitted with a Bristol Taurus II.

Westland's entry to A39/34 was a more radical design. The needs of the army co-operation squadrons were solicited by the firm which then prepared six design studies. A high wing layout was seen as desirable, but this complicated the undercarriage arrangement which initially consisted of retractable units on a stub wing. This appeared to lack sufficient strength for rugged field operations. Accordingly, large spats were instead chosen, into each of which was installed a Browning gun. Two prototypes of the Westland P8, to be powered by either a Mercury or Perseus, were ordered in June 1935.

A huge canopy was topped by the unusually shaped wing, the pilot's head being unusually level with the mainplanes. A very good view was thereby afforded. To

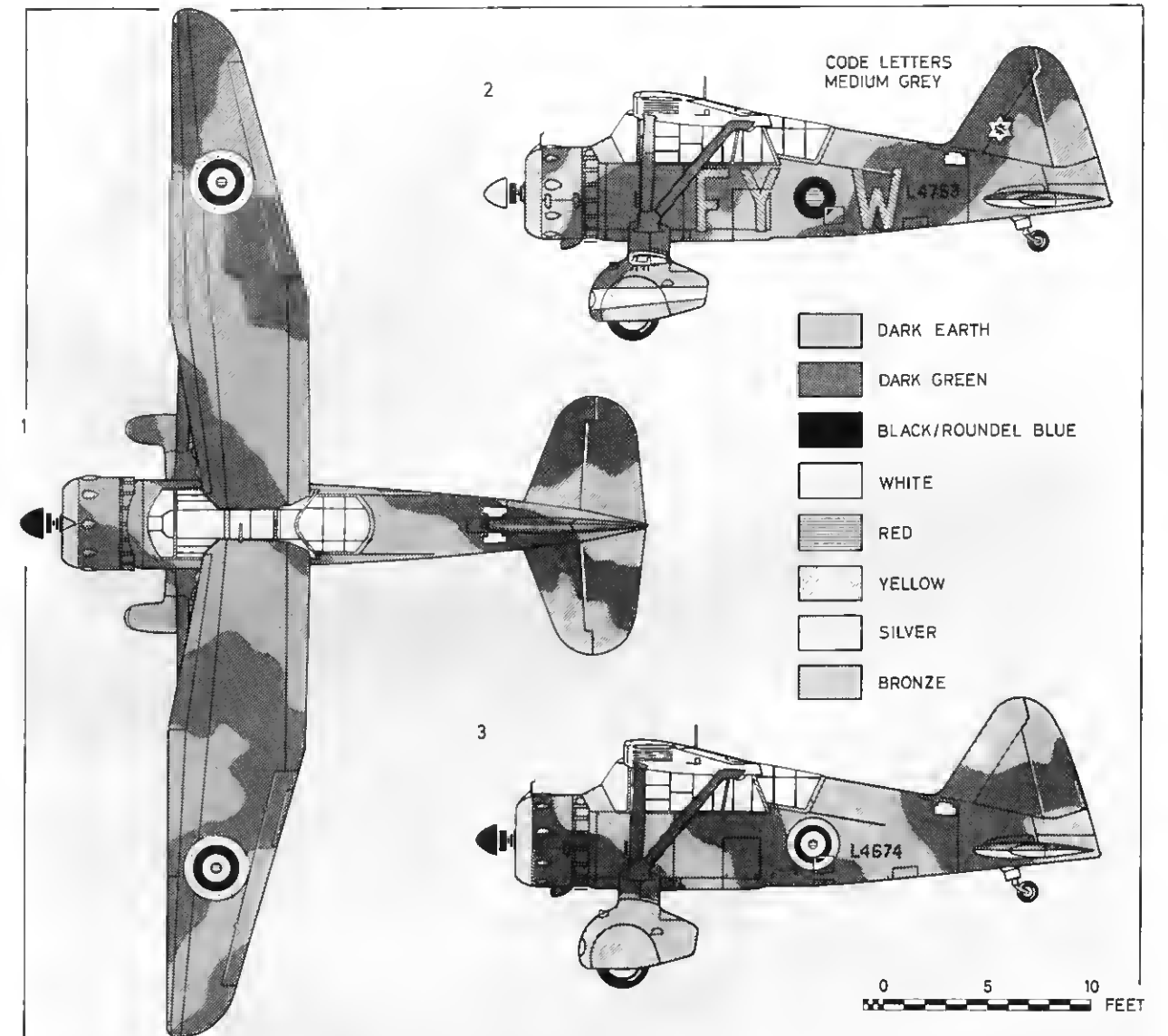
enable the machine to operate from confined spaces the wing was slotted and flapped, which resulted in very short take-off and landing runs. The rates of climb and controlled descent were very good and on tests the first prototype, K6127, was found to stall at 55 mph so that in a strong wind it could almost hover.

The first prototype flew on June 15 1936 from Boscombe Down and was initially fitted with a two-bladed wooden propeller driving a Mercury IX.

During trials commenced at A&AEE Martlesham in November 1936, K6127 was found to have a top speed of 237 mph at 10,000 feet. It was, however, a very noisy aircraft, and this was likely to cut crew efficiency on even short flights. At 5,000 feet the top speed was 221 mph. Take-off run was merely 135 yards in a 5 mph wind and clearance over 50 feet took a 285 yard run. The landing run was 520 yards over a 50 feet screen, the landing run with brakes 240 yards. The P8 was considered preferable to the Bristol machine, mainly on account of its high-wing layout. An initial production order was therefore placed for 144 examples named Westland Lysander and serialised L4673-4816.

Martlesham's trials had extended into 1937, then on July 27 K6127 was assigned to RAE Farnborough before returning to Yeovil for modifications in August 1937. The School of Army Co-operation at Old Sarum tested the machine briefly in February 1938 and, whilst approving the excellent crew visibility, were perturbed at the low top speed. In June 1938 K6127 returned to RAE and next month proceeded to Martlesham for more trials, returning to Yeovil on December 7 1939 where it stayed until the summer of 1940.

K6128, the second example, was completed close on the heels of the first. It, too, was fitted with a Mercury ME 3M(a). Martlesham received the machine on February 12



1 The 'B' camouflage pattern is shown in this plan view of a typical pre-war Lysander in the 'L' range with even number serial. 2 FY-W: L4753 wearing the marking carried in the summer of 1939. Spinner and spat stripes are in flight colour. The camouflage is to the 'A' pattern. 3 L4674 wearing typical 1938-style production camouflage and Type A1 roundels. In both profiles the camouflage wraps under the fuselage, but on some aircraft the silver under surfaces were also applied to the fuselage lower sides up to the 60 degree tangent.

1937 and in April it returned to Westland. There it was re-engined with a Perseus XII making it the prototype Mk II. Performance comparison trials were then flown, after some sound proofing had also been undertaken.

If the Lysander was to be of use for army co-operation work it was essential that it performed well in tropical conditions and could be shown to have sufficient range for operations in India. Therefore K6128 was sent to the Packing Depot on February 28 1938, then shipped to Karachi where, on March 31 1938, it arrived still bearing its all-silver finish. Both prototypes had worn underwing black serials, fuselage and rudder

serials and the customary six Type A roundels. K6127, for its appearance in the New Types Park at the 1937 Hendon display, had worn a black '6' as its identity number.

In India K6128 was used for service trials with No 5 Squadron, general performance trials and further trials concerning crew visibility improved for the pilot by sliding cockpit panels and better framing layout.

L4673, the first production aircraft, flew in April 1938, and was despatched to A&AEE on May 16 1938 for extended type trials. As was feared, its performance was inferior to the lightly loaded prototypes. Fitted with an 890 hp Bristol Mercury XII its loaded weight was 5,833 lb. Its top speed of 229 mph at

10,000 feet was reached after a 5½ minute climb. It took 9½ minutes to reach 15,000 feet and a quarter of an hour to get to 20,000 feet. At sea level the top speed was only 206 mph and the stalling speed remained at 55 mph.

Thus its performance was not all that greater than that of the Hector which had a top speed of 187 mph at 6,560 feet and climbed to 10,000 feet in just under six minutes. The Lysander's rate of climb from sea level was 1,650 fpm, and the service ceiling 26,000 feet, again little better than the Hector's. It took a 230 yard run to clear 50 feet when flying at its all-up weight, and cruised at about 150 mph. The two spat

guns remained and in the rear cockpit was a Lewis gun. Bombs or containers could be slung on the stub wings which protruded from the spats. Excellent view forwards and sideways remained, but entry to the high cockpit initially by means of a ladder was now to be by steps cut into the fuselage.

The layout of services behind the engine was 'cheotic', which did not bode well for field operations. But what worried the Air Ministry most was the slow top speed at a time when fighters were achieving speeds of well over 300 mph. If the Lysander needed to protect itself it would have to rely on its good manoeuvrability and small turning circle.

A possible solution lay in the greater power of the Perseus XII on the production Lysander II, giving 905 hp. Yet this version had a higher loaded weight of 6,015 lb which removed the advantage of higher power. Externally the Mk II was almost identical to its forerunner apart from the absence of bumps over the cylinder heads on the cowlings. Any advance in performance was worthwhile, minimal though it would be, and from L4739 the first batch was completed to Mk II standard, the second aircraft being fitted with dual controls to speed pilot conversion. Meanwhile, the availability of the superior Mercury XV engine was tested in L4673 which was also used for radio trials. L4674, completed in May 1938, also served for A&AEE trials and works test programmes.

Engine production demands taxed the Mercury programme and favoured the Perseus, but once these were overcome the Perseus fell by the wayside and the Mercury engine was the usual power plant.

The first squadron chosen to be re-equipped with the Lysander was No 16 at Old Sarum, its strength being set at 16 Initial Equipment and four Immediate Reserve aircraft. Equipment began in May 1938. Overseas Nos 6 and 208 Squadrons were earmarked for re-equipment by the summer of 1939. On the outbreak of war 257 of the 263 Lysanders built were still in service hands and included Mk IIs L6847-6888, N1200-1227, N1240-1276 and the batch N1289-1299, this point having been reached in deliveries when the war commenced.

Production Lysanders were finished in Dark Green and Dark Earth camouflage with silver under surfaces. The two upper surface colours were applied around the fuselage under surfaces. Black serials were applied to the fuselage, rudder and wing under surfaces. Type A1 yellow-blue-white-red roundels were painted on the fuselage sides and above the mainplanes. Type A blue-white-red roundels appeared under the wing tips. No squadron identity was worn until medium grey squadron codes were introduced late in 1938. These were worn in some cases alongside Type A1 roundels until early 1939 when Type B roundels smaller in diameter than their predecessors were applied. Underwing serials and roundels were gradually deleted. Squadron letters were usually placed ahead of the roundels.

Continued on page 108



**Above** The first prototype, K6127, in silver finish, appears to have a grey cowling. Production aircraft had increased cockpit glazing. **Below** L4674, the second production Lysander, settles down at Yeovil in the summer of 1938. It was used for a variety of trials. **Bottom** Three Lysanders of No 16 Squadron in the spring of 1939. Codes have been changed to KJ, serials painted out, Type B roundels of small diameter painted over the Type A1, and the under surfaces are black and white in fighter style.



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- Bomb bay doors open or closed.
- Includes 4 crew figures — Pilot, Navigator, Bomb Aimer and ground crewman giving victory salute.
- Gun turrets revolve.
- Guns elevate and traverse.
- Rivet detail must be seen to be believed.
- Clear parts include optional side blisters.
- Parts included for building 2 of the Merlin engines in detail.
- Full bomb load may be built.
- Good cockpit detail includes all seating and accurate joystick.
- Contains approx. 290 parts.
- Decals included for building 3 different bombers.
- Full painting instructions.
- One of the most realistic models yet produced by Tamiya after many years of research. Based on the aircraft at the R.A.F. Museum, Hendon.



"Oh! Boy, Oh! Boy. What an aeroplane! What a piece of aeroplanes!" That was the remark of Sir Roy Dobson, head of A. V. Roe Ltd., on seeing the prototype of this famous bomber making its first flight. The first operational Lancaster was received by No. 44 (Rhodesian) Squadron, Waddington, at Christmas 1941 when Great Britain stood alone facing German occupied Europe. Subsequently the original order for 1,000 of these fantastic aircraft was increased to 7,377 when the last one was delivered.

Need we relate the exploits of this most renowned bomber of W.W.II and, perhaps, of all time. The bombing of the Ruhr Dams and its participation on the 1,000 bomber raids. It was even used as a pathfinder, in 1942 when No. 8 Group, The Pathfinder Force was formed a Lancaster squadron, No. 83 was included, it carried an H2S in a bulbous radome which gave a radar picture of the ground below.

At the end of the war "Lancs" were used to carry returning P.O.W.'s from Germany. The last Lancasters went out of service in 1954 but those of Argentina were in use until 1963/4. Sir Arthur Harris, C-in-C of R.A.F. Bomber Command 1942/5 said "The Lancaster was the greatest single factor in winning the war".

**RIKO**

RICHARD KOHNSTAM LTD., 13-15a HIGH STREET, HEMEL HEMPSTEAD, HERTS.





Continued from page 106

Lysanders are not known to have worn their squadron badge on the fin associated with earlier army co-operation aircraft, but some squadrons certainly wore them against a star when codes were in place. For Flight Identity a coloured flash was applied across spats, and spinners worn by production aircraft were sometimes painted in Flight colours.

In March 1939 Lysanders of No 16 Squadron — and possibly of others — had their under surfaces painted in black and white in the manner of fighters when they performed in exercises from Duxford. Underwing roundels were deleted. No 22 Group being under Fighter Command, its aircraft were being brought into Command line — and there was also a notion that Lysanders could fly coastal standing patrols. To the outbreak of war, however, Lysanders were still to be seen flying with silver under surfaces sometimes also applied beneath the fuselage. Roundels and even serials were retained on some and perhaps No 16 Squadron was the only one to wear black/white under surfaces. Can any reader confirm this?

Squadron	Identity letters	Example	Base
No 2	KO	KO:X-L4705	Hawkinge
No 4	TV	TV:N-L4741	Odiham
	FY	FY:W-L4753	Odiham
No 13	AN	—?—	Odiham
No 16	EE	EE:M-L4795	Old Sarum
	KJ	KJ:Y-L4801	Old Sarum
No 26	HL	—?—	Catterick
No 614	YX	—?—	Cardiff
<b>Overseas squadrons</b>			
No 6	XE	—?—	Ramleh, Palestine
No 208	GA	GA:B-L4711	Oasaba

Above Three Lysander IIs of No 4 Squadron. Spats carry a yellow flash and the spinners are yellow. Below L4729, a typical pre-war production Lysander with camouflage extending under the fuselage end on the inner sides of the spats.



Squadrons equipped with Lysanders by the outbreak of war were as follows:

Notes  
Type B roundels. KO codes also used early in the war  
Type A1 roundels  
Type B roundels, code changed early 1939.

Only two machines received by 9.39  
Type A1 roundels. Silver under surfaces retained

Aircraft delivered by September 31 1939 and their units are given in the following listing. The first date is that of acceptance by the squadron/unit. Where no second date is given the machine remained on the squadron at the outbreak of war.

#### No 16 Squadron

(First to be equipped) gave up its early aircraft mainly to No 208 Squadron and was re-equipped. Its aircraft were: L4675 25.5.38 - 24.4.39, then to 208 Squadron summer 1939. L4676 first to CFS 16.5.38; to 16 Squadron 2.6.38; to 208 Squadron mid-1939. L4677 31.5.38 - 24.4.39, later to 208 Squadron. L4678 10.6.38 - 28.3.39; L4679 15.6.38 - 21.4.39, thence to 208 Squadron. L4680 20.10.38 - 21.4.39; L4681 22.6.38 - 21.3.39; L4682 28.6.38 - 9.6.39; L4683 30.6.38 - 28.3.39, thence to 208 Squadron. L4684 22.6.38 - 21.4.39, thence to 208 Squadron. L4685

8.7.38 - 12.4.39, thence to 208 Squadron. L4686 12.7.38 - 12.4.39, thence to 208 Squadron. L4685 18.7.38 - 12.4.39, thence to 208 Squadron. L4689 21.7.38 - 12.4.39, thence to 208 Squadron. L4691 26.7.38 - 12.4.39.

#### No 2 Squadron

L4687 16.7.38 - L4693 28.7.38 - L4694 13.8.38 - L4695 13.8.38 - L4696 15.8.38 - L4697 17.8.38 - L4698 20.8.38 - L4699 24.8.38 - L4700 23.8.38 - L4701 23.8.38 - L4702 26.8.38 - struck off charge after being burnt out, 28.4.39. L4703 5.9.38 - L4704 30.8.38 - L4705 30.8.38 - L4706 5.9.38 -

#### No 208 Squadron

Equipped summer 1939 with L4707, L4709, L4710, L4711, L4712, L4713, L4714, L4715, L4716, L4717, L4718, L4719, L4720, L4728, L4729, L4731.

#### No 1 Group Special Flight, Boscombe Down

L4737 29.11.38 - L4738 30.11.38 -

#### No 4 Squadron

(First to be equipped with Mk II): L4740 30.12.38 - L4741 30.12.38 - L4742 30.12.38 - L4743 30.12.38 - L4744 30.12.38 - L4745 31.12.38 - L4746 2.1.39 - L4747 5.1.39 - crashed and damaged beyond repair 31.5.39. L4748 11.1.39 - L4749 11.1.39 - L4750 11.1.39 - L4751 12.1.39 - L4752 19.1.39 - L4753 24.1.39 - L4754 19.1.39 - L4755 19.1.39.

#### No 13 Squadron

L4756 24.1.39 - L4754 24.1.39 - converted to 1425M at St Athan 4.4.39. L4758 24.1.39 - L4759 24.1.39 - L4760 28.1.39 - L4761 29.1.39 - L4762 31.1.39 - crashed and written off 25.4.39. L4763 31.1.39 - L4764 4.2.39 - L4765 6.2.39 - L4766 6.2.39 - L4767 6.2.39 - L4768 9.2.39 - L4769 9.2.39 - L4771 14.2.39 - L4772 14.2.39 -

#### No 26 Squadron

L4770 13.2.39 - L4773 17.2.39 - L4774 18.2.39 - L4775 20.2.39 - L4776 20.2.39 - L4777 22.2.39 - L4778 23.2.39 - L4779 24.2.39 - L4780 24.2.39 - L4781 27.2.39 - L4782 28.2.39 - L4783 6.3.39 - L4784 6.3.39 - L4785 7.3.39 - L4787 3.39 - N1217 7.7.39 - N1218 7.7.39 - Delivered to 19 MU and held in storage 3.39 - 9.39. L4788, L4789, L4790, L4791 and L4792.

#### No 16 Squadron (Mk II)

L4793 20.3.39 - L4794 20.3.39 - L4795 20.3.39 - L4796 23.3.39 - L4797 23.3.39 - L4798 23.3.39 - L4799 27.3.39 - L4800 27.3.39 - L4801 27.3.39 - L4802 29.3.39 - L4803 30.3.39 - L4804 31.3.39 - L4805 4.4.39 - L4806 4.4.39 - L4807 4.4.39 - L4808 12.4.39 - Delivered to 8 MU and held as stored reserve 4.39 L6847 - 50. L6851 used for cooling trials 29.4.39 - L6852 - 54 stored reserve.

#### To School of Army Co-operation, Old Sarum

L6855 2.5.39 - L6856 2.5.39 - L6857 4.5.39 - L6858 4.5.39 - L6859 6.5.39 - L6860 9.5.39 - L6861 9.5.39 - L6865 15.5.39 - L6866 15.5.39 - L6867 16.5.39 - L6868 16.5.39 - L6869 17.5.39 - L6870 22.5.39 - L6871 22.5.39 - L6873 25.5.39 - Stored reserve L6862-64. To 36 MU for packing, thence to Middle East: L6874-84, L6887-88. To 10 MU for storage L6885-86. N1200 to 10 MU 1.7.39. N1201-5 to 5 MU for storage. N1206-8 to 10 MU for storage. N1209-14 to 20 MU for storage.

#### No 614 Squadron

N1215 30.6.39 - N1248 24.7.39 - N1248 24.7.39 - N1249 24.7.39 - N1250 24.7.39 - N1251 8.39 - N1252 28.7.39 - N1253 28.7.39 - N1254 28.7.39 - N1255 31.7.39 - N1256 31.7.39 - N1273 24.8.39 - To 5 MU for storage: N1276, N1289-92. To 6 MU for storage: N1225-7, N1240-42, N1257-62. To 9 MU for storage: N1220-24, N1293-99 (N1295-99 delivered 2.9.39). To 19 MU for storage: N1259-72. To 20 MU for storage: N1263-68. To 27 MU for storage: N1243-46. □

October 1975

## Detailing 'Amazon' Class frigates

Modifications to the Airfix kit described and drawn by Paul E. Beaver

THE TYPE 21 General Purpose Frigate, perhaps better known as the 'Amazon' Class, was envisaged in 1967 when a joint tender was submitted to the Ministry of Defence by Vosper Thornycroft and Yarrow. The idea was to produce a frigate to be powered by gas turbine engines (COGOG) to supersede, and to replace, the Types 41 and 61 frigates in RN service. HMS Amazon was commissioned in May 1975 by HRH the Princess Anne, and is the lead ship of a class of eight which have been ordered by the Royal Navy. There are also potential sales to Denmark and Greece. Recent reports suggest that this class compares very favourably with foreign frigates of a similar tonnage, for example the USN's USS Knox.

Airfix have produced a 1:600 scale kit of HMS Amazon (F169) and, since it seems to have been modelled on the early artist's impression, not unnaturally there are several inaccuracies. However, these are easily corrected as the general shape and appearance is good.

#### Selected corrections

It is obviously not possible to record every change or correction in a new class of warship, but the following can be assumed to

be accurate for a model of HMS Amazon or HMS Antelope in 1975.

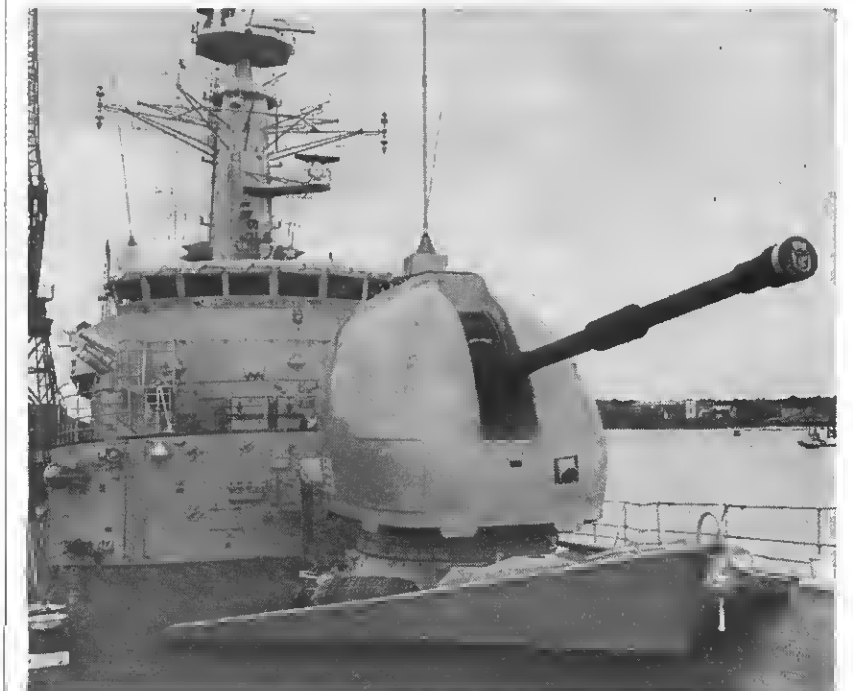
1. Remove the hull side of the hangar deck the length of part 3 as shown.

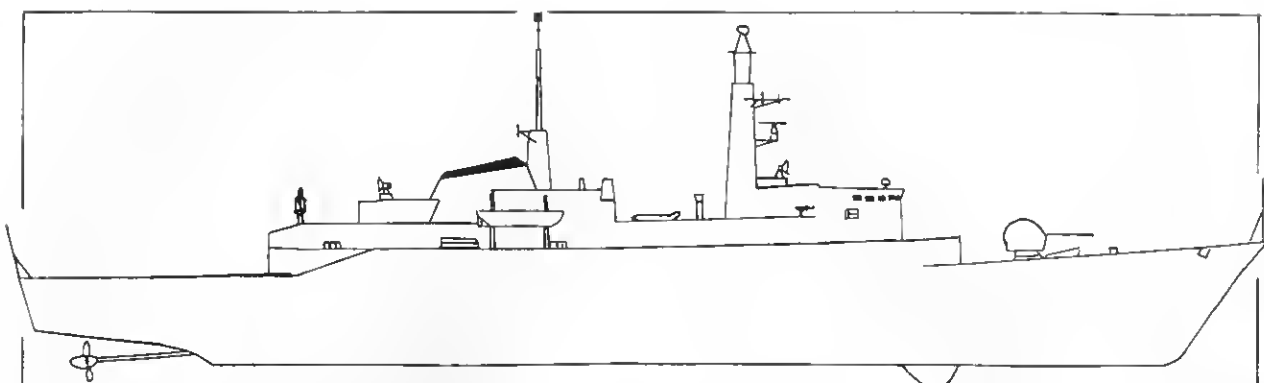
2. At the moment there is no plan to equip the 'Amazons' with ASW torpedo tubes, so parts 54 and 55 should be deleted.

3. The life rafts need to be repositioned as follows: port side — aft of the Oerlikon and directly beneath the ship's launch. In a single stowage and double benked beneath the after missile radar position and also forward of the superstructure on the boat deck; starboard side — again a single mounting aft of the Oerlikon, forward of the superstructure, and double mountings again below the radar position. The double mountings are vertical not horizontal as in the kit.

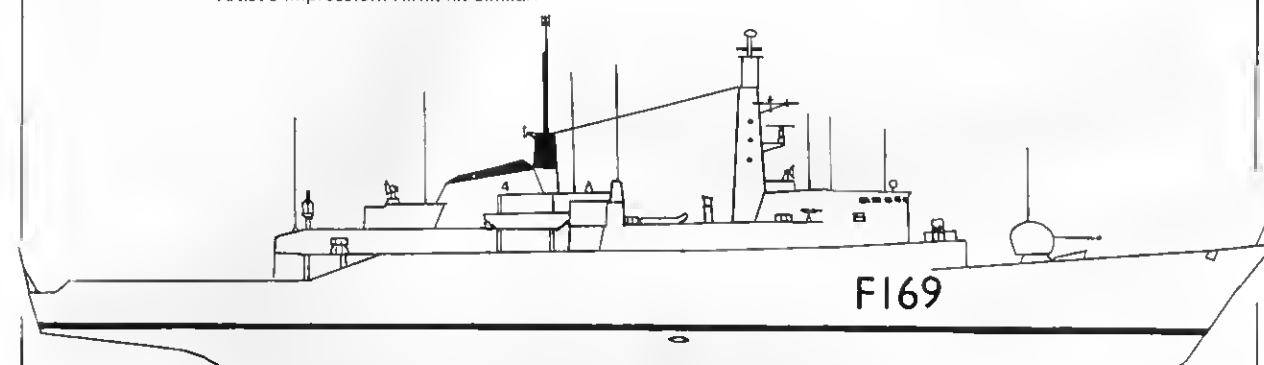
4. Modify the foremast top to include the primary (part 29) and the secondary surveillance radar positioned to starboard and port respectively. In fact the general shape of the foremast top must be remodelled and the secondary radar (smaller) must be constructed.

The Vickers Mk 8 4.5-inch GP gun on HMS Amazon. Note also foremast, bridge, ship's bell, ship's crest, and the aerial positions (Vosper Thornycroft).

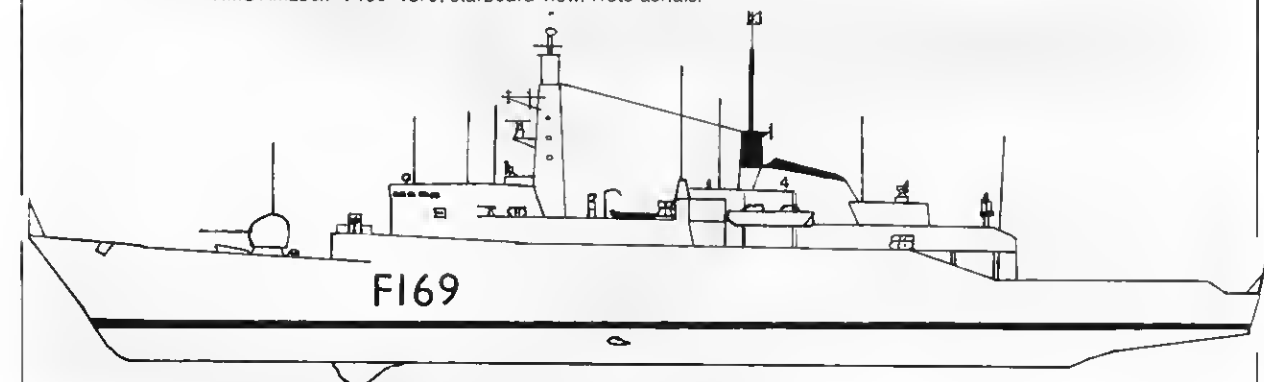




Artist's impression: Airfix kit similar.



HMS Amazon 'F169' 1975, starboard view. Note aeriels.



Port view. Note life rafts, Corvus, quarter deck and stabilizers.

5. Add two 8-barrel Corvus rocket launchers forward of the bridge, plus their six lockers.

6. Add two struts to the ensign staff and to the jack staff.

7. Add two supports to each side of the hangar deck.

8. The pennant number decals should be positioned under the bridge on the hull sides and amidships on the stern.

9. At Flying Stations, the hangar door is 1/2 open and the Oerlikons point abeam.

10. The ECM aeriels on both masts are not solid and must be reshaped, also various aeriels and wires must be added.

11. The MF/DF aerial over the bridge (part 24) should be a ring not solid.

12. The ship's launch (part 50) should be remodelled with two cabins.

13. A fin stabilizer should be fitted to each side of the hull as shown.

#### Colour scheme

**Mid-grey:** Hull, superstructure, radar dishes, gun, boat covers, whaler, launch (unless otherwise painted blue or red), gun barrel end-cover, anchor, Bosun's boat (part 37), boat covers. **Dark grey:** Flight deck (non-skid). **Dark green:** All decks except the Flight deck. **Black:** Gun barrel, funnel top, mainmast top above funnel, ECM aeriels, boot topping, anchor chain, helicopter rotor blades, gemini (part 38), bridge windows. **Dark blue:** Seacat

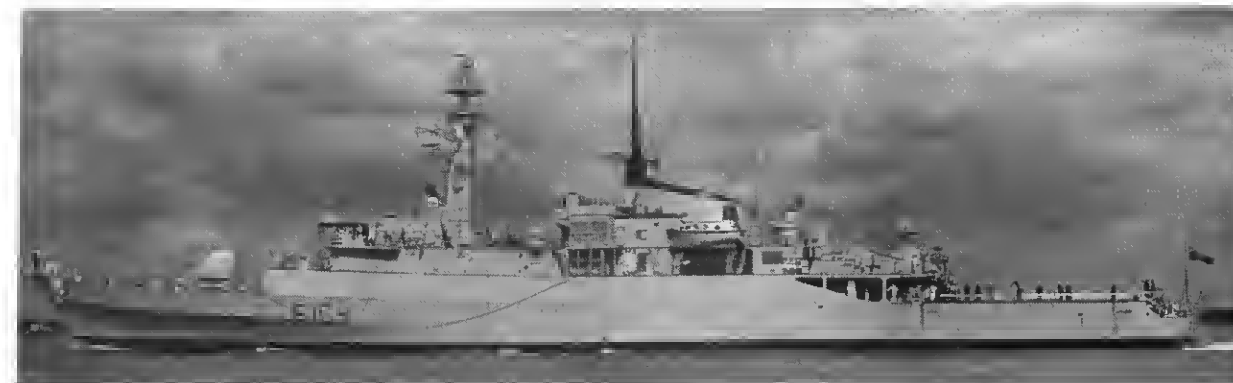
missiles, Lynx helicopter. **Red:** Seacat noses, port navigation light, aerial bases. **White:** Fairleads, bollards, staff and jack strut, mainmast top, life rafts. **Brick red:** Anti-fouling under the waterline. **Green:** Starboard navigation light. **Brown:** The jack staff and the ensign jack are both wooden, the vents on the superstructure give the appearance of being brown. **Gold:** Cone of Seacat launcher. **Bronze:** Propellers.

#### Individual vessels

HMS Amazon (F169): figure '4' on the funnel in black outlined in white (this is the squadron number). Flight deck code is AZ. In service 1975.

HMS Antelope (F170): figure '7' on the

AIRFIX magazine



#### Technical data (1973)

Length overall: 117.04 m (384 feet).  
Beam: 12.72 m (41 3/4 feet).  
Max Draught: 4.12 m (13 1/2 feet).  
Max Displacement: 2,500 tonnes.  
Speed: 35 knots (Max), 20 knots (Cruising).  
Complement: 192 all ranks.

#### Armament

One Seacat SAM launcher, one Vickers Mk 8 4.5-inch GP gun, Lynx helicopter (at present substituted by a Wasp), ASW torpedo tubes (may be fitted later), Exocet

Port beam view of HMS Amazon while on builder's trials in the Solent in 1973. Note Red Ensign and the two cabins on the ship's launch (Vosper Thornycroft).

SSM (HMS Active only at present), two 20 mm Oerlikon GP hand-operated guns, two 8-barrel Corvus rocket launchers (for flares,

Amazon seen from above in 1973. Deck colour dark green, flight deck dark grey (flight deck markings later revised) (Vosper Thornycroft).



Seacat SAM



Exocet SSM

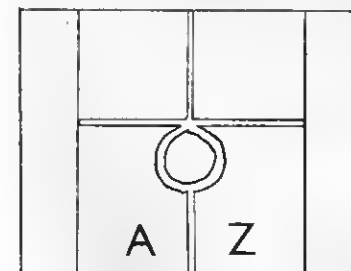
funnel again black outlined in white; the ship's launch has a white cabin and deck and is white below the waterline, the hull is red. Whaler is similar white/red/white. Coded AO on the flight deck.

HMS Active (F171): She is at present fitting out in Southampton with Exocet SSM for 'ard. Handed over to the RN on June 30 1975.

HMS Abuscade (F172). On builder's trials. HMS Arrow (F173) and HMS Alecrity (F174): Fitting out.

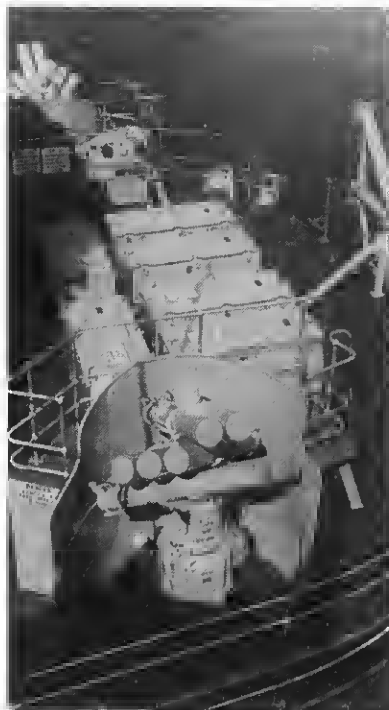
HMS Ardent (F175): Recently launched. HMS Avenger (F176): Building.

F169 - F171 are Vosper Thornycroft built at Woolston, Southampton. F172 - F176 are Yarrow built on the Clyde.



Flight deck markings are in white on dark grey.





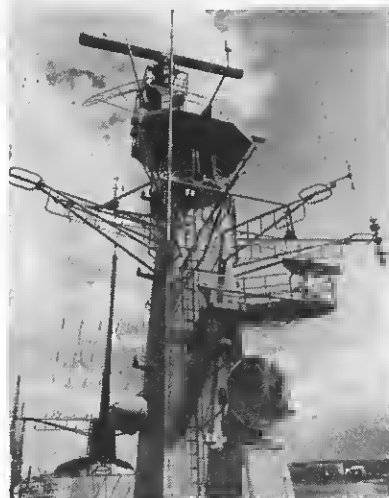
Corvus rocket launcher forward of the bridge showing lockers and screen (Vosper Thornycroft).

chaff or smoke).

#### Acknowledgements

I am indebted to the following for providing much of the information and encouragement: MOD PRO at Portsmouth; Vosper Thornycroft; C. Dawson, Esq; Cdr W. J. Bingham, RN, CO of HMS Amazon; and my father, N. K. Beaver, Esq. □

Foremost detail showing radars. ECM aerials, EW domes and missile tracking radar (Vosper Thornycroft).



## The Lyndhurst Collection

Remarkably well preserved collection of military vehicles visited by Terry Gander

SITUATED ON THE A24 near Warnham, just North of Horsham in Sussex, is Tylden House which, as well as being the home of a very pleasant restaurant, is also the domicile of the Lyndhurst Collection of World War 2 vehicles. This collection is the result of many years of collecting and

patient renovation and contains many remarkable items.

The bulk of the collection is of American origin, but there are a number of British vehicles included, all of which are very well looked after and equipped.

One of the strengths of the Lyndhurst Col-



lection is the care and attention to detail which can be seen in the way that tool stowage and the like has been carried out 'as per the book'. This can best be seen on a 1940 Morris 4x2 truck which has the first-aid kit correctly stowed on the bulkhead of the driver's cab along with the pick and shovel, and in the rear is a No 19 radio set.

Other examples on show have the same attention to detail, not the least of which is a SAS Jeep decked in desert markings and complete with every last item down to the tin hats on the side. This particular exhibit will be of special interest to many as it was used as the original for the Tamiya kit of the desert Jeep.

Other items in the collection are veterans of the Normandy rallies of recent years, one of which is a Dodge ambulance. Tracked vehicles are included in the shape of a M29C Weasel, a M9A1 half-track with crane and a M5A1 Light Tank hull which has at some time in the past had its superstructure removed to enable it to be used as some form of artillery tractor by the British Army.

At the time of writing a special building to house the collection is under construction and it will then be possible to put on display the other items in the Lyndhurst Collection, which turns out to be a remarkably wide-ranging number of mementos of World War 2. As well as a collection of uniforms and badges there are such oddities as a baby's gas-mask, a parachutist's folding bike, numerous posters and newspapers, and a good gathering of division signs and insignia. There are some weapons to be seen, not the least of which is a 40 mm Bofors anti-aircraft gun.

One of the main strengths of this remarkable collection is that it is very much a living concern. All the vehicles in the vehicle park are runners and they put the clock back on odd occasions in the form of open days held at Tyldens on odd weekends starting in August. On these open days the vehicles are put through their paces in the spacious grounds and visiting vehicles can be seen.

It is hoped that the Lyndhurst Collection can be merged with another large collection of vehicles at present in the West Country and when that happens the number of vehicles on show will be more than doubled. But the present collection is well worth a visit as it stands. It is open to the public at a modest charge and I heartily recommend all with an interest in World War 2 to pay the collection a visit. □

**Top left** A brace of Dingos. **Centre** The SAS Jeep used by Tamiya as the original for their kit. **Bottom** This M5A1 Light Tank hull was used by the British Army during the 1950s as a tractor (note the large towing hook on the front). Does any reader know exactly what it was used for?

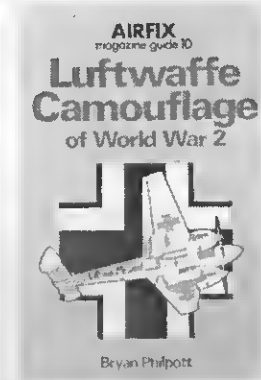
## NEW Airfix Magazine Guides!

### No 9

## Ancient Wargaming

by Phil Barker

Written by perhaps the best known figure in the ancient wargaming field, this is a fascinating introduction to the hobby. The book explains in detail how to enact tabletop battles using the Wargames Research Group's standard ancient rules, and there is advice on choosing and organising a basic army. The organisation of a wide variety of ancient armies is then discussed, including Greek, Roman, Egyptian, Byzantine, and many others. Ideal for anyone wanting greater realism in their games. £1.20 net (£1.33 by post).



### No 10

## Luftwaffe Camouflage of World War 2

by Bryan Philpott

A highly detailed guide bringing together all the different paint schemes of the Luftwaffe's fighters, bombers and other aircraft. There are extensive notes, photos and drawings of national insignia, unit emblems, 'kill' markings, etc, together with the camouflage used on all fronts. Many of the schemes are related to available kits, and advice is given on achieving authentic model colour schemes. £1.20 net (£1.33 by post).

Both 64 pages, 8 1/2" x 5 1/2", fully illus. September 11.

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# Swiss Air Force 'at home'



## Peter F. Guiver visits Dubendorf

AT THE END of June the large Swiss Air Force Base at Dubendorf, near Zurich was open to invited parties, and I was privileged to see something of the operations and aircraft at this station. Despite its small size, Switzerland has a powerful Air Force, and a wide range of types are based at Dubendorf.

A sight for sore aviation enthusiasts' eyes were three Junkers Ju 52/3Ms, which were obtained by the Swiss Air Force in 1939, and are still in regular use. Known as 'Grandmothers', these aircraft are in excellent condition, but spares are becoming a problem, mainly for the engines, and

several parts are made from scratch.

Other light transports at Dubendorf include a small number of Beech Twin Bonanzas, which are operated by the Air Force on VIP flights for the Swiss Government, Pilatus Porters and Dornier Do-27s. These latter two types are operated by Leichtfliegerstaffel (Light Support Squadron) No 7 on various transport and supply missions, including parachute dropping.

The main helicopter type used by the Swiss Air Force is the Alouette 3, and many of these were in evidence. Earlier this year Switzerland suffered from some exceptionally heavy snowfalls and numerous avalanches, and these helicopters (together

Continued on page 116

Top of page One of the Hunter flight lines at Dubendorf. Upper surfaces are in grey/dark green camouflage, undersides are light gray, underwing fuel tanks are medium and light gray, serials white. Above left Pilatus Porter V-620 in matt khaki and very dark grey camouflage with light grey under surfaces and white serial. Note grimy national marking on fin. Left In service since the late 1950s, this Dornier Do 27 has glossy dark khaki upper surfaces and medium blue lower surfaces. Wing tips and rear fuselage band are orange dayglo, serial white, propeller silver with yellow tips. Below With over 35 years' service behind it, this Junkers Ju 52/3M is still in use. A-702 is white with irregular khaki striping. Serials black. Fin red.



The F-15 Eagle, described as the 'best, most manoeuvrable fighter ever built' is the first pure air superiority fighter to be developed for the USAF since the F-86 Sabre of 1948. High performing, heavily-armed, agile enough to perform 5g turns which would rip most aircraft to pieces, the F-15 has been designed to fulfil one specialist role: to rule the skies during the late seventies and early eighties. In simple terms, a dogfighter.



First requirement for a new air superiority fighter came from the USAF in 1965. Known first as the FX project, McDonnell-Douglas won the formal design competition and Pratt and Whitney the contract for the turbofan power units. Air superiority requires a combination of performance, avionics and weaponry, and McDonnell-Douglas made some 500 design studies of features for the aircraft. High speed agility was of prime importance. The need to save on weight, cost and complexity ruled out a variable-geometry layout, but twin engines were adopted for survivability. Multiple control systems will keep the F-15 fighting in the face of battle damage, and the engine is module-built to allow for rapid repair. Off-the-shelf avionics have been used wherever possible, and flying controls have been kept simple.

Main weapon for the F-15A is a General Electric 20mm Gatling gun mounted in the right hand wing root. The new Philco-Ford 25mm gun - 6,000 rounds per minute! - will be fitted to the second Air Force wing. Missile armament is a mix of 8 Sidewinders and Sparrows and the Navy's new Agile may be adopted later. Just as important as

the impressive array of weaponry itself is the Hughes APG-63 'dogfighting' attack radar which gives the pilot a continual flow of information and calculations for air-to-air combat.

The USAF has made some proud claims for the F-15. They say it will out-climb, out-maneuvre and out-accelerate any MiG now or in the next decade. In simulation exercises against a MiG-25 Foxbat the Eagle has proven superiority with either gun or missiles. Even assuming that Soviet missile technology is further advanced, the F-15's manoeuvrability will still give it a clearly-defined edge.

The Eagle made its first flight at Edwards Air Force Base on July 27th 1972 and by the end of 1973 eleven were involved in test flight studies. Fully operational deployment should be attained during 1976. The Eagle, with its smooth flat surface area painted 'air superiority blue' looks every inch a lethal weapon. The dogfighter has returned.

Revell's superbly detailed 1/72nd scale F-15 Eagle Kit makes the most of this stunning new dogfighter. The finished model stands over 104" long with a wing span of over 7". Full realism details include removable Pratt & Whitney Turbofan engine. Opening clear canopy reveals cockpit instrument panel, control stick, pedals and ejection seat. To complete the kit optional position landing gear with moveable wheels, speed brake, four sparrow missiles and full colour USAF markings. Add the Eagle's air superiority to your collection.

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Continued from page 114

with some Alouette 2s) were in use round the clock searching for and rescuing men trapped and stranded villagers and their livestock. However, the helicopters' main role is to provide supply and support services for the Air Force and the Swiss Army.

A large amount of flying training is carried out at Dubendorf, with the clean-looking Pilatus P-3 being used for primary tuition. Advanced flying training is undertaken on the Pilatus P-2, which dates from the late

**Above** Venom FB 50 J-1794 returns from a training flight. Medium and dark grey camouflage with light grey under surfaces. Note nose profile and air intake covers on ground. **Below** Pilatus P-3 trainers on the flight line. **Bottom** The Swiss AF has many Alouette IIIs in service. This one is glossy khaki with orange dayglo lower nose, central fuselage, tailplane and fins. Main rotor is grey with dayglo tips, tail rotor red and yellow, tail skid/guard yellow. Note wheel/skid undercarriage.



1940s, and then on to the DH Vampire, many of which were built in Switzerland in the 1950s. Over 50 P-2s, and some 70 P-3s were constructed by Pilatus at Stans, and thus Switzerland has provided many of its own aviation needs.

Transport and training are by no means the only activities at Dubendorf, and many combat aircraft could be seen around the airfield. Oldest of these were several Swiss-built DH Venoms, and a search for a suitable replacement type has been under way for some time, several types having been evaluated.

At least two squadrons (Staffel) of the popular Hawker Hunter could be seen at

Dubendorf, and this is in use in large numbers with the Swiss AF, with refurbished aircraft still being delivered from the UK.

The most modern combat type in the Swiss AF is the licence-built Mirage III, and at Dubendorf Staffel 10 operate the Mirage IIIRS variant in the reconnaissance role.

The day of my visit was a normal flying day, with all the above types active. Hunters were taking off in twos and threes, four Mirages got airborne in a stream take-off, whilst P-2s, P-3s, Venoms, Vampires, Porters, Do-27s and a Bonanza were all slotted into the pattern. On one side a Porter was practicing parachute dropping, and on the apron an Alouette 3 was engaged on hand-



**Above** All-yellow badge of Staffel 11 on nose of Hunter F 58 J-4055. Warning triangle red and white. **Below** Hunter line-up.



Badge of Staffel 10 on nose of Venom FB 50 J-1644. Badge is white with black lining and red eyeball, beak, chin and wedge round '10'. This Venom had a red nose with black top, and red wing tip tanks.

ing techniques with an underslung load.

As the area around Dubendorf is largely built-up, flying is restricted to morning and afternoon periods, from Monday to Friday. Also, the main civil airport for Zurich is but a few kilometres to the north of Dubendorf, and a direct link is maintained between the two airfields in order that operating procedures can be co-ordinated.

Other aircraft types visible at Dubendorf included two Piper Super Cubs, some Swiss-built C-3603 target-tugs, and an immaculate civil-registered Twin Pioneer used for survey work.

Mention must also be made of the small but pleasant museum that has been established at Dubendorf. This contained a 1918 Nieuport 28, a 1931 Dewoitine D26, a 1933 Swiss-built Fokker CVE biplane, and a T-6 Texan. German-built types included a Jungmann, a Jungmeister, a Fieseler Storch and a Messerschmitt Bf 108. A wide range of historical aero engines were also on display, ranging from the Gnome Rotary, through the RR Merlin, to the Sapphire jet, together with other items of past military aviation.

Some 1,000 personnel are stationed at Dubendorf, and the majority of these are reservists who are required to provide at least three weeks' military service per annum.

In addition to the large number of aircraft out on the airfield, many more of the same types could be seen in the hangars, and there cannot be many airfields that operate such a varied range of types in such large numbers.

I would like to thank most sincerely our guide at Dubendorf, Rolf Kyburz, for a most interesting and enjoyable tour of the base.

## squadron codes and colours 1939-1956

By Michael J. F. Bowyer and John D. R. Rawlings

**LF 37 Squadron (c)**  
Letters used by the squadron from September 1939 to March 1946 although for an unknown period squadron aircraft are believed to have carried individual letters only. Used successively on Wellington 1As, eg LF:P-N2889, Mk 1Cs both in the UK and again in the Middle East on Wellington 1Cs, eg LF:D-T2822 and Mk IIs. Later carried on Mk Xs, eg LF:P-LP646, and Liberator Vs, eg LF:H-KH285, the latter type being used from October 1944 to March 1946.

**LF 379th Bomb Group, USAAF (c)**  
Used on B-17s of 526th Bomb Squadron from March 1944 to January 1945, although the Group began to relinquish use of codes from September 1944.

**LF Station Flight Predenneck**  
Post-war allocation.

**LG 215 Squadron (c)**  
Used on Wellington 1/1As September 1939 to May 1940. Unit became part of 11 OTU in April 1940. Example: LG:G-N2912. A new 215 Squadron formed at Newmarket December 1941 moving to the Far East in April 1942 probably never having received any aircraft of its own. It is believed that the unit never wore code letters in the Far East.

**LG 91 Bomb Group, USAAF (c)**  
Letters worn by B-17s of 322 Bomb

Squadron December 1942 to June 1945.

**LG 13 Group Comm Flight (c)**  
Allocation for post-war use confirmed.

**LH 353rd Fighter Group, USAAF (c)**

Used on P-47s and P-51s of 350th Fighter Squadron June 1943 to October 1945.

**LH Station Flight Mepel (c)**  
Post-war allocation confirmed.

**LJ 614 Squadron (c)**  
Letters carried on Audax, Hind, Lysanders and Blenheim IVs between September 1939 and August 1942.

**Below** Wellington 1A LF:P-L7779 of No 37 Squadron. It joined the squadron on April 17 1940 and made its first operational sortie on May 12/13 1940. That month it flew seven sorties, making seven in June, six in July, six in August and two in September, being withdrawn before the squadron proceeded overseas (IWM). **Bottom** Wellington LG:L-4387 first joined 11 OTU on April 15 1940 where it took on its 'LG' coding. Although the OTU was allotted 'KJ' and 'OP' as its identity, it retained 'LG' from the time when this was 215 Squadron's identity until about the start of July 1940. L4387 was destroyed in a crash when taking off on August 13 1940 on a training flight (IWM).



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#### Continued from page 118

care is needed in cutting out the locating slot for the wings and the five fins that were featured on this aircraft have to be cut from plastic card using the templates included on the instructions. This is certainly an unusual aeroplane and well worth making just to hear the comments that are bound to be passed about it.

#### Blackburn Firebrand

Again this is a complete kit, that is except for wheels, propeller and markings, and can be made into an acceptable model of the Wyvern's predecessor.

By using the basic parts and combining these with components from the Skyraider or Sea Fury a much better model will result, as once again the Airmodel mouldings appear to show evidence of hurried research and poor workmanship on the original masters. Setting the correct dihedral angle is a touch-and-go affair which would have been improved if braces had been included in the kit. If you really must have a Firebrand and don't mind working really hard at your modelling, this kit will appeal, but one cannot help thinking that only a low percentage of those purchased will ever see the light of day as complete models.

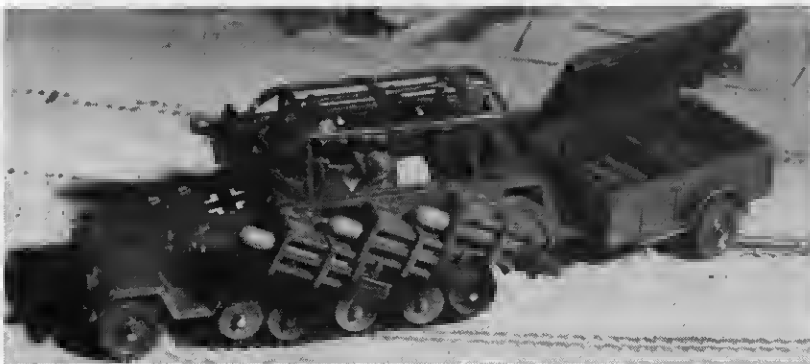
#### Tandem wing Lysander

A useful conversion kit comprising a new fuselage, tailplane, fins and rear turret, that can be used in conjunction with any of the currently available Lysander kits to produce one of the most unusual experiments of World War 2.

The simplicity of this conversion kit underlines Airmodel's particular forte, and it would perhaps be better if they concentrated more on this type of conversion kit rather than complete vac-form models in which they rather trail the field.

Airmodel are to be congratulated on their endeavour in attempting to fulfil many gaps that exist in the specialist market, but they might be well advised to take a closer look at their techniques and quality control and perhaps cut-down on their output with a view to improving their overall quality.

Corgi Hanomag and trailer.



Matchbox Wespe on its diorama base.

#### Matchbox Wespe

THE STANDARD of Matchbox kits is now well known by AFV enthusiasts and one of the latest, the Wespe, in 1:76 scale, will most certainly be popular. The imagination of the designers in providing mini diorama bases and figures in unusual poses is to be applauded as this must encourage the younger modeller to make up an attractive model. Another excellent little kit that of course also has some conversion potential for the enthusiast is the PzKpfw II tank and other SPG versions can be modelled using the basic tracks, hull and running gear. Price is 30p.

#### Corgi militaria

CORGI HAVE gone to town just recently with some superb models for junior wargamers, including what is undoubtedly their best military model to date — a superb Sdkfz 251 'Hanomag' fitted with 'working' SWR 40 rocket racks on the sides, plus trailer to carry the spare rockets. Finished in panzer grey, with a crewman crouching behind the machine-gun (but no driver!), and with a frame radio aerial as shown in the accompanying photograph this is a really attractive model, despite technical inaccuracies

which would worry the true scale modeller. Most importantly, it looks right. Price of the model, which appears to be approximately 1:48 scale, is £2.20.

In their 'Juniors' range, Corgi have also released the following: a modern Ford tank transporter tractor with trailer and American Commando V-100 armoured car in one set at £1.05; twin peck comprising a Daimler scout car and 'Sting' helicopter at 55p; and American 105 mm field gun with two figures for 28p.

As we've said before, it's a shame the die-cast manufacturers have to produce models to a price and box size rather than to some constant scale, but you can't have everything!

#### Frog Typhoon

HAWKER'S TYPHOON has been somewhat neglected by the kit manufacturers but this has now been rectified by a splendid addition to the Frog range. The subject chosen is the 1B and like its companion, the Mirage, released at the same time, it is finely moulded and accurate; lining up exactly with the fine plans recently published in Ian Allan's *Typhoon & Tempest at War*.

The only part which is suspect is the rudder which Frog have depicted as being covered in what appears to be a rather coarse weave sackcloth, but attention from wet and dry soon puts this right.

Wing cannons are nicely detailed and the complement of underwing rockets and their rails look just right.

As is usual with this company's releases, the Typhoon kit contains alternative markings, one set for a No 56 Squadron aircraft and the other for the machine flown by Flying Officer Lallement of 'A' Flight No 609 Squadron.

The kit is priced at 55p which is a bargain for everyone, especially those to whom World War 2 aircraft are not just models but a way of life.

#### Frog Mirage

THE DASSAULT Mirage 111E is a popular aircraft, as evidenced by the number of kits that are now available, in a variety of scales, the latest being a 1:72 scale version from Frog.

This model is superbly moulded with just the right amount of etched surface detail and it is sure to be a winner. The parts fit together well and the overall shape is accurate, the only parts needing attention in the review sample being the wing pylons and undercarriage doors, all of which had slight moulding marks that needed filling.

The main wheels are well detailed but the front oleo has the wheel moulded as an integral part — a practice that not too many manufacturers now follow. The only criticism is once again the rather odd looking pilot figure but as it is unlikely that many readers of this magazine use this component in any kit, it is hardly worth losing any sleep over.

Markings for two aircraft are supplied and these are to a very high standard being both accurate in colour and register.

One set of decals is for a 111E of Escadron de Chasse 1/3 'Navarre' of the French Air Force, and the others for a 111Q(A) of No 3 Squadron, Royal Australian Air Force.

At 65p this kit is good value for money and can be turned into a real show stopper.

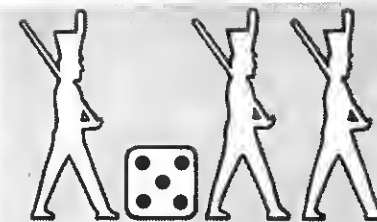
#### Constellation and DC-7

LIKE THE recently released Collector's Series, these two airliner kits are old models in new boxes with new markings.

The Super Connie scales out at something like 1:125 which will immediately rule it out of most serious collector's thoughts. Another shortcoming is the complete lack of transparencies, and in these days of super-detailed mouldings there will be few — apart from junior — who will view the decal fuselage windows in very good light. Basically the kit captures the shape of this popular piston-engined airliner but there is a lot of work to be done if an acceptable model is to result. Markings are for a TWA aircraft.

The DC-7 is another of those leisurely ladies of an almost forgotten era and scales out at nearly 1:130, so it cannot even be displayed alongside the Connie in a constant scale collection. Like its more shapely contemporary, this kit also lacks any form of transparency, but it is moulded in the same clean way with a minimum of flash, but far too many rivets. In this case markings are for a machine of United Airlines circa 1953 and these are nicely printed and in register.

The enthusiast who has time to spare and really wants a Connie or DC-7 will welcome these two re-releases, but the main market is obviously the younger modeller. This is not a bad thing and any company which is prepared to re-issue such kits to capture what must be a lucrative market, must be congratulated, for the youngsters of today are the enthusiasts of tomorrow, and their pocket money may well go towards much more refined offerings, so in the long run everyone gains.



**Skirmish Wargaming**, by Donald F. Featherstone. Patrick Stephens Limited, Bar Hill, Cambridge, CB3 8EL. Price £2.95.

THIS NEW BOOK from the wargaming world's best-known author breaks entirely new ground in presenting, for the first time, a detailed and readable introduction to the increasingly popular field of individual wargaming.

The beauty of this system lies in the fact that each figure on the table — and you can use 54 mm models just as happily as 20/25 mm — represents an individual man with his own character, service record and fighting capabilities. Thus there is no need to scale down battalions to 24 figures or whatever, since actions rarely take place between forces of greater than section or platoon size, and similarly — a great advantage to those who enjoy wargaming but find painting figures a chore — you only need half a dozen figures for a really exciting game.

Taking this a step further, it is also obvious that the wargamer is no longer so restricted in his choice of period. Instead of having to spend months building up an elaborate army for a particular period, a couple of weekends' work will enable him to amass half a dozen Romans, Vikings, knights in armour, Roundheads and Cavaliers, Napoleonic infantrymen, Zulus and SS troopers, so that he can fight battles in any period he fancies. Even those wargamers with firmly established favourite periods can now branch out at minimal expenditure of time or money.

Don Featherstone has been ably helped in the composition of this book by the well-known 'skirmish' trio, Steve Curtis, Ian Colwill and Mike Blake, who have already privately published several sets of rules for this type of wargaming. They have provided him with a complete set of basic playing rules which are applicable to any historical period with only minor modifications, so that any wargamer purchasing this book can sit down to a 'skirmish wargame' without further ado.

The bulk of the book, however, is occupied by ten historical scenarios, in which a situation is outlined in narrative 'story' form, the personalities described, and the actual battle left for the individual wargamer to fight. These scenarios range from a Viking raid on the English coast through a medieval, English Civil War, Napoleonic and Colonial skirmish up to World Wars 1 and 2, with a naval boarding action and Wild West gunfight thrown in for good measure. Each scenario is accompanied by a cast list of characters, in which each is identified as a 'veteran', 'average' or 'novice', and by any necessary special playing rules to augment

the basic set.

The book is completed by a chapter on cheap ways of collecting and converting model figures suitable for skirmish wargames. Should have a very wide appeal.

#### Sixth Fleet

NAVAL WARFARE in the Mediterranean during the 1970s is the subject of this board game from Simulations Publications Inc, with Russia and the Western Alliance as the opposing forces. The game is issued to subscribers to *Strategy and Tactics* magazine, issue number 48, but is also available boxed at £4.55.

Ships, submarines and aircraft likely to be available in or near the Mediterranean are represented by die-cut counters all bearing a silhouette of the represented types. Submarines and the larger ships have individual counters while other counters represent three smaller ships or 12 aircraft.

To a large extent 'Sixth Fleet' is an abstract game. Ships and aircraft can be neither damaged nor destroyed but are instead retreated when up against a superior force. Elimination only takes place when retreat is impossible.

The rules can be absorbed at one reading and all the information required during play is printed on the counters or on the playing map. The counters are printed with three different attack values for air, surface and submarine targets, and also shown are a movement rate, and defence strength and electronic countermeasures values.

The most novel feature is that combat takes place before movement, so that to launch an attack a player must move into contact with an enemy unit during his movement phase and then wait until his next turn before attacking, thereby giving the opponent the opportunity of attacking first and then moving out of range. This calls for a great deal of forethought and planning and makes the game every bit as challenging as chess.

Altogether an intriguing game and particularly suitable for solo playing when an opponent can't be found. Available from Simulations Publications UK, Freepost, Altrincham, Cheshire, WA15 6BR.

#### Charlot

CHARLOT IS the first in the PRESTAGS series, of five old SPI games integrated into one system of compatible wargaming stretching over nearly 5,000 years: as SPI put it, 'For the first time it is possible to match the pharaoh's armies against a Spanish tercio, or Alexander the Great against Scipio Africanus'.

A general verdict: this grand vision is not matched by the games themselves, they are too obviously facelifts of their predecessors ('Armageddon', in this case) achieving an impression of compatibility.

Even so, the individual games — although simple — are not to be despised. The standard PRESTAG rules, covering all five games, contain many interesting features. There is a good balance between the two principles of flexibility and limitation: the need to protect flanks, keep within Leadership Radius, separate fire units from cavalry from *melée* infantry all force a tight battle-line.

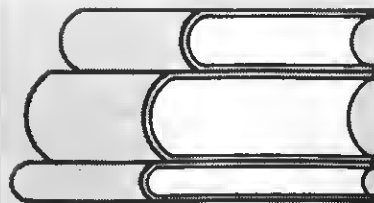
Half the battle lies in skill of initial placement — but the variation in unit strength ('Dot' and 'Bracketed' *Melée* Value, Fira Attack and Range factors, the crucial deployment and combat reduction of leaders, etc) allow infinite permutations in that placement, a boon for the natural tactician.

The PRESTAG rules contain minor foolishness like line of sight for fire units, and the (Optional) rules on Panic Level, eg: 'If the exact Panic Level is reached at exactly the same time by both sides, the Defender in the action is considered to panic. The Attacker does not panic.' Panic Level is crucial, given the difficulties of rallying, and should not be decided by a lottery in this way.

In general, PRESTAG demands the virtues of thought and caution; facing, flank protection, leader proximity, initial placement, 'tactical concession' (retreat to avoid a greater margin of defeat) and so on mean that the good player is the thinker rather than the inspired. In this, unusually for what is basically a simple game, the PRESTAG standard rules are historically accurate, to a high degree. There is much more room for differences of individual skill, and — thanks to the provision of Optional and Simultaneous Movement rules — for differing levels of complexity. The standard PRESTAG rules are worthy of respect.

The separate additional 'Chariot' rules are also a mixture of good and bad. The Chariot itself provides a definite element of movement and flexibility, even anarchy in some over-endowed scenarios. The Historical Notes are good, accurate and amusing, while Terrain Effects show no obvious defects. The main complaints perhaps lie in the map and the choice of scenarios, and concern one feature of ancient wargaming, the fort. The terrain is unimaginative, mainly flat — reflecting an assumption that all Biblical battles were fought on plains, ignoring the vital factor of fortifications (Troy, for example) in ancient combat. Thus the scenarios omit Troy, the fall of Babylon or any of the frequent siege battles — nor can the rules be adapted to provide for this major omission.

'Chariot', like 'Armageddon', is based on 'the feeling... that the simplest game possible would be most widely accepted'. It is quite acceptable. It can even be exciting. It suffers from the uncertainty of SPI in any wargame based before 1800; which perhaps explains why no decent strategical game has yet been produced for two players.



## Aviation

**Attack Aircraft of the West**, by Bill Gunston. Ian Allan Ltd, Terminal House, Shepperton, Middx. Price £3.95.

ATTACK AIRCRAFT of the West, the second in a series — the first was *Bombers of the West* — by Bill Gunston, studies the design, technical, political, and financial birth-pangs of 11 'attack' aircraft (an interpretation of the attack role is given in the Foreword). The studies are divided into three categories: the United Kingdom, Collaboration, and the United States, and deals among others with aircraft as diverse as the V/STOL Harrier whose visual aspect and small radar image have earned it the title of the 'invisible fighter' — the 'polymorphic' (able to change shape) AFVG which never left the drawing board — the flying avionics system known as the A6 Intruder — and the Fairchild Republic A-10A, the latest USA attack aircraft built for one role — close air support where the emphasis is on survivability rather than sophisticated avionics.

The book contains photographs of ten of the aircraft; the abortive AFVG is illustrated by an author's sketch. The Harrier appears on the dust cover only.

It is not a reference book but there are enough facts and figures to make it useful as such, though it suffers from the lack of an index. Written in a brisk style with scant regard for the Official Secrets Act and little respect for political manoeuvring — the author sympathises with the aerospace industry — the book shows how complex today's plane-making has become, and reveals the many outside influences which effect the design and therefore performance of today's attack aircraft.

**B-24 Liberator in action**, by Steve Birdsall. Squadron/Signal Publications, 3461 East Ten Mile Road, Warren, Michigan 48091, USA. Price \$3.95.

CONTAINING THE accustomed collection of superb black-and-white photos with informative captions, numerous detail sketches of Liberator armament, flap and undercarriage detail and other useful modelling insights, and a full-colour centre section depicting six aircraft side views, this is yet another 'must' from this adventurous American publishing house. Little more can be said since these books will be familiar to most *Airfix* Magazine readers and we can confirm that the standard of printing and reproduction is well up to scratch. The back jacket features two further side views and six tail fin markings, also in colour. You could almost retitlle the book 'modellers' lib'...

**A-7 Corsair II in action**, by Lou Drendel. Squadron/Signal Publications, 3461 East Ten Mile Road, Warren, Michigan 48091, USA. Price \$3.95.

AS IS CUSTOMARY with these books, when dealing with modern aircraft, there is more text in this title than in the one reviewed above, but in compensation for modellers seeking alternative marking schemes, the photographs are particularly clear and well-chosen.

The Corsair is a popular modelling subject, and there is plenty here to interest the most fanatical devotee of this rather ugly aircraft, since its paint schemes must number among the most colourful anywhere. The colour artwork is particularly striking, and there are also the usual plethora of detail sketches, etc. Nice one!

**Civil Aircraft Markings 1975**, by John W. R. Taylor. Ian Allan Ltd, Terminal House, Shepperton, Middx, TW17 8AS. Price 60p.

THIS HANDY 172-page card-back appears here for the 25th time, and at a price that surely puts it within the reach of 99.9 per cent of potential users.

Two-thirds of the space is taken up with British civil aircraft, listing the registrations (which range from G-EACN to G-WGHB) and giving the aircraft type, the owner or operator, and a space where spotters can record where and when seen.

Oversas airline fleet lists complete the book, ranging from AP (Pakistan) to 9Y (Trinidad and Tobago), and there are 66 wall-reproduced monochrome photographs, chosen — the author tells us — from some 2,000 potentials!

**de Havilland Venom**, by Roger Lindsay. Available from the author, 1 Chantry Close, Stockton-on-Tees, Cleveland TS20 1EN. Price £1.05 including postage.

PRODUCED TO A similar format to a Squadron/Signal publication, but with a much more detailed text and with drawings, unfortunately, in black and white only, this is a private monograph on one of the best-known British fighters of the '50s which will be of obvious interest to a great many modellers.

The lucid text, which describes the Venom's entire history, including a short section on Sea Venoms in foreign service, is backed by a carefully chosen assembly of photographs, including cockpit details, and three pages of colour scheme drawings. There are also sections on modelling the Venom, and on Venom camouflage and markings, adding up to an extremely worthwhile book.

## Military

**Mortars and Rockets; Light and Medium Field Artillery; Infantry, Mountain and Airborne Guns; and Anti-Aircraft Guns**, all by Peter Chamberlain and Terry Gander. Macdonald and Jane's, Paulton House, 8 Shepherdess Walk, London N1 7LW. Price £1.20 each (paperback).

THESE ARE THE 'dynamic duo's' four latest titles in Macdonald and Jane's 'WW2 Fact Files' series of cheap and handy reference books. Each is produced to a large format with 64 pages, packed with rare and fascinating photographs, data tables and brief descriptions, although as we have remarked with regard to a couple of earlier titles in this series, there is a great deal of wasted space in some places.

Each book is divided alphabetically into nationalities, with the weapons themselves arranged in order of size from the smallest up. The 'mortars and rockets' title is, in fact, in two sections, mortars occupying the first 33 pages, rockets (including, of course, the German 'Nebelwerfer' and Russian 'Katyusha') the remainder.

Taking the 'high spots' from each title, the field artillery book includes such famous weapons as the British 25 pdr, American and German 105 mm and Russian 76.2 mm guns; the 'infantry, mountain and airborne' title such weapons as the German GebG 36, French 6.5 cm Canon de 65 M Mla 1906, British airborne 6 pdr and Czech Skoda Model 1915; and the 'anti-aircraft guns' book the infamous German '88' as well as the 40 mm Bofors, 20 mm Oerlikon and British 3.7-inch.

All in all these are very useful reference books, very reasonably priced, and well worth adding to your shelves.

**Italian Tanks and Fighting Vehicles of World War 2**, by Ralph Riccio. Pique Publications, North Lea House, 66 Northfield End, Hanley-on-Thames, Oxon. Price £1.75.

THIS 96-PAGE booklet is an illustrated guide to all tanks, armoured cars, self-propelled guns, half-tracks and other vehicles used by Italian armoured formations in the 1930s and during World War 2. Descriptions and technical details of each type are supplemented by a coverage of organisation and AFV formations, plus a list of preserved vehicles and other appendices.

Many of the photographs (most of which are of excellent quality) have not been published before, making this an invaluable book for all armour enthusiasts, modellers and wargamers. It is particularly relevant in light of the fact that ESCI are known to be about to release (at last!) 1:72 scale kits of an Italian M13/40 tank and Semovente SPG.

**Through Mud and Blood**, by Bryan Perrett. Robert Hale & Co, Clerkenwell House, Clerkenwell Green, London EC1R 0HT. Price £4.20.

SUB-TITLED 'Infantry/Tank Operations in World War II', this new book from Bryan Perrett will be invaluable to all serious students of armoured warfare. It is an extremely detailed account of British Tank

Brigade operations from their earliest actions in France in 1940 with Matilda IIs, through the desert campaign with Matilda IIs and Valentines, to their final battles in France and Germany in 1944-5 with Churchills and Shermans.

Although it is basically a history book, this volume is also full of the technical details required by modellers and wargamers, many useful maps and several pages of excellent quality photographs.

The place of the Infantry Tank in World War 2 has suffered a great deal of neglect under the romantic shadow of 'blitzkrieg' and this book is thus a valuable contribution to the literature of armoured warfare. Recommended.

## Naval

**An Introduction to Royal Air Force High Speed Rescue Launches 1938-45**, by John Pritchard. Published by the author and available from him at School House, Hadham Road, Standon, War, Herts, price 56p including postage and packing, or 50p at the RAF Museum bookstall.

THIS IS A small, 20-page booklet, with the same number of photographs, on the high speed launches operated by the RAF during World War 2. These were of three main types and each is detailed with a brief specification, identification numbers, and a narrative on their development and service. The particular attraction of this booklet is that little has hitherto been written on this aspect of the RAF. All the profits from this booklet go to the RAF Air Sea Rescue Launch Fund, to acquire and preserve a representative craft.

**Royal Navy Warship Drawings**, by Norman A. Ough. David MacGregor Plans/Neptune Publications Ltd, 99 Lonsdale Road, London SW13. Price 95p.

SHIP MODELLERS have long been indebted to the world-famous drawings of the late Norman Ough, and it is pleasing to see that a selection of these have been brought together within one cover.

Seven vessels are included, and each set of plans is accompanied by photographs and brief historical notes. Those with more immediate appeal to the plastic modeller are of HMS *Dorsetshire*, a near-sister to the *Suffolk*, a kit of which is available from Airfix (there would be problems in converting the *Airfix Devonshire*, a project suggested in the book), and of HMS *Wespsite*, which is portrayed as she appeared in 1931 and which would be most useful to anyone wishing to re-model the Airfix kit.

The rest comprise HMS *Daring* (1932), *Penelope* (1936), *Hedingham Castle* (1945), *Cediz* (1946) — a possible model subject using Airfix *Cossack* and *Daring* components — and *Marvel* (1954), all of which have detailed plans of gun mountings, boats, etc, applicable to other RN vessels.

The two drawbacks regarding this publication both concern the size in which the plans have been reproduced. First, they are not of constant scale, and range from 1:382 for the *Hedingham Castle* to 1:825 for the

*Dorsetshire* — *Cadiz* and *Daring* are 1:625 and 1:580 respectively, and surely these at least could have been 1:600? Second, one or two have been reduced so much that it is impossible to read the printed lettering on them.

These two points apart, a fine booklet and quite good value at 95p.

(This review originally appeared in the Essex branch magazine of the International Plastic Modellers Society, and is reprinted here by kind permission of the editor.)

## Rail and steam

**Railways and War since 1917**, by D. Bishop and K. Davis. Blandford Press Ltd, 167 High Holborn, London WC1V 6PH. Price £1.90.

PRODUCED TO THE usual Blandford format, with a short introduction, large section of full-colour paintings, and final section of descriptive notes, this book fills a useful gap in the literature of warfare even though it is far from being a definitive volume on the subject.

Contents include armoured trains, locomotives, gun-trucks, armoured rail cars and other types, of all nationalities. The emphasis is obviously on World War 2, with the result that the book will probably be popular with modellers and wargamers, although it is a shame there is not more detailed information and a few scale plans.

However, it is full of stimulating ideas, particularly for diorama constructors, and will — hopefully — stimulate further research on this much neglected topic.

**Traction Engines Past and Present**, by Anthony Beaumont. David & Charles Ltd, South Devon House, Newton Abbot, Devon. Price £2.95.

ALTHOUGH THIS book was published some considerable time ago, our reviews system seems to have slipped up because it has only just come to the top of the pile — for which we apologise to the publishers and potential purchasers alike.

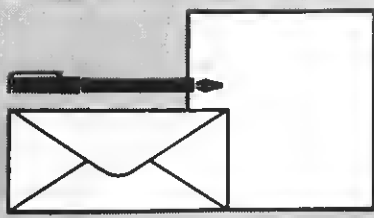
The author has produced a number of books on traction engines and allied steam vehicles, so is completely conversant with his subject.

In the present industrial situation of conservation of fuel, etc, there could well be a new working life for these fascinating machines. In this book Mr Beaumont compares the working role to the preservation scene. This is very effectively done by means of a series of excellent photographs — in fact, the picture is used in preference to text.

For older readers, the agricultural scenes will evoke many memories. This is not entirely lost in the preserved field, as at various rallies engines can still be seen performing their traditional duties and demonstrating the sheer power of steam.

## Clanger!

OUR EDITOR is currently walking around wearing a dunce's cap. For 'Vickers' on page 46 of *Airfix Magazine Annual 5* please read 'Sopwith'. He's cracking up, folks...



letters to  
the  
editor

### Skyvan camouflage

THE CAMOUFLAGE drawing for Skyvans of the Suften of Oman's Air Force included in the recent Airfix kit do not, in fact, represent the latest scheme.

The disruptive pattern was not carried on to the under surfaces as it was originally intended that these should have been light blue. However, in view of the nature of operations in the Oman, the light blue was deleted and dark green (BS 381C/641) substituted.

A gloss white heat reflecting panel over the cockpit was introduced on the last batch of Skyvans (serialled 911 to 916 inclusive). Numbers 913 and 4, incidentally, were fitted out as Skyliners with four-bladed propellers and passenger interiors, but retaining the military capability of rear loading.

The 'factory finish' of these aircraft is gloss but this soon assumes a matt appearance in service due to the effects of sun and sand.

J. B. Church, Lymington, Hants.

### Squadron codes

I HAVE FOLLOWED, with great interest, the current series of Squadron Codes by Messrs Bowyer and Rawlings, and would crave a small space to raise a point concerning the code letters HI.

They rang a bell within my memory which caused me to forego amongst my spotting records of those action-packed days of 30-plus years ago, and I came up with the logging of an all-white Beaufort Mk II coded HI-G at Cranfield on April 12 1944. Its dispersal then, and for quite some time after, was at the Salford road end of runway 01/19 on what was an already-overcrowded airfield containing an extremely varied assortment of kites; ie Beaufighters, other Beauforts, a batch of all-white Wimpys with their attendant fighter affiliation Hurricanes, Spitfires of every mark imaginable being modified, Mustangs, Tempests, Typhoons in row after row being processed as it turned out for D-Day, Bostons and Havocs (one on all-blue Turbinlite example), the odd Mossie, Oxford, Anson, Dragon Rapide, etc, not to mention those 'heavies' which regularly appeared on the morning after the night before's forays into Europe, to whom Cranfield proved to be a safe haven due to damage which prevented them from making their own bases, and so on.

Unfortunately, the serial number of this Beaufort escapes me, as does the unit to which it belonged, but I think it's safe to assume it wasn't 66 Squadron! No, it was

probably the resident 51 OTU, supported by the reference to a Beaufighter II having been seen bearing HI codes, though, strangely enough, I don't seem to have logged any other aircraft from 51 OTU with these letters. I would welcome the authors' comments on this matter, please.  
Geoffrey Pennycook, Bedford.

MR PENNYCOOK'S letter is interesting for it seems to confirm the use of HI on Bristol twins at least. Whether they were of 51 OTU is open to question for this unit certainly displayed no unit codes for much of its life. What a nostalgic picture he recalls, for when I was at Cranfield in July 1944 I counted over 100 Spitfires of all types, not to mention so many other aircraft. There must have been over 300 on the airfield or in the hangars full of various types. It was there that I recorded for my diary the Spitfire XIV RB174 that often finds its way into print. Have any other readers recollection of HI codes? Any shots of HI Meteors at Duxford? Michael Bowyer.

### Operation Sealion

MR WISE'S SECOND article on Operation Sealion was most interesting, but I feel some of your readers might be confused over the references to the P.14 and P.17 rifles. Perhaps this broad outline would be of interest.

In the years before 1914 plans were made to produce a .276 inch (.28 inch) high velocity rifle for the army, with a forward looking bolt for greater strength and designed for far faster production techniques. A 'pattern' rifle was made but because of the outbreak of war, production was cancelled. It was thought that existing factories in this country and the Commonwealth would not be able to cope with the demand for the current SMLE. So a scuffed-up version of the .28 inch rifle to take .303 inch ammunition was produced and contracts for manufacture were placed in the USA.

This new rifle, the P.14, had a smaller magazine capacity than the SMLE, was more accurate — the .28 inch had a better, longer based sight — and was robust. But it gave a heavier recoil and a louder report, and some users preferred the SMLE. Also it was found that SMLE production was ample for the demand — even to replacing Canadian unit's Ross rifles, so the P.14 was not required.

When the USA entered the 1914-18 war, their standard rifle was the .300 inch Springfield. The existing government arsenals

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Opinions expressed by correspondents on this page are their own and do not necessarily reflect the views of the Editor or Airfix Products Ltd.

could not cope with the demand and the major arms companies were tooled up for producing the P.14. As it was not worthwhile breaking up the production lines, the companies persuaded their government to accept a .300 inch version of the P.14. The modifications were simple and mass production was soon under way of the .300 inch rimless P.17 rifle. This weapon continued in use in the US army until superseded by the Gerend Automatic Rifle. The P.17 rifle was sometimes called the Enfield in America because of its parentage.

During the last war our stock of P.14s was issued to front line units after the fall of France, but they were replaced with SMLEs and No 4 rifles as soon as possible. All .300 inch purchased and early Lend/Lease weapons were rapidly transferred to the Home Guard, who used P.17 rifles, Browning automatic rifles and water-cooled Browning MGs almost to the exclusion of other small arms. These .300 inch weapons all had a red band painted on them as an obvious visible sign that .303 inch rounds could not be fired from them.

After the first war Britain finally produced its .28 inch rifle, this time with a different round, a 20-round magazine, and capable of selective fire. Unfortunately during trials for the new NATO standard weapons the rifle was faulted on a few minor points, which could easily have been modified. But the final argument against it was that the US army personnel would not have confidence in such a small round and the Winchester .308 inch round was adopted as the NATO 7.62 mm standard. The .28 inch could not be scaled up to accept this round and was discontinued and the UK version of the FN became standard issue. It is interesting to note that the US army has since adopted the .223 inch ArmaLite for use outside NATO areas and have conducted trials of even smaller rounds.

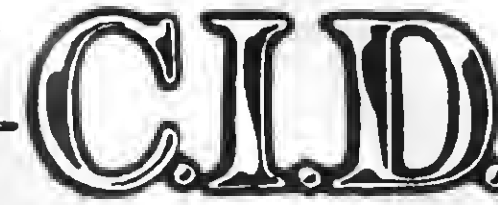
R. Aylward, Slough.

No. 6

# What do you know about the police?



1. Does London Airport have its own police force?



2. What does "C.I.D." stand for?

3. Which is the highest rank held by a policewoman?



4. Is a chequered cap band the sign of a particular police rank?



5. How many police officers are there in England & Wales?  
a) Over 20,000.  
b) Over 50,000.  
c) Over 100,000.

This is the sixth in a series depicting the background, present-day work and development of Britain's police force. Watch out for the next in the series, which will appear shortly in this publication. For further information about the police write to Police Quiz, (Dept AJ83) Home Office, London SW1A 2AP.

1. Not the Metropolitan Police assumed the responsibilities of the port in 1974.
2. Criminal Investigation Department.
3. At present, Commander in the Metropolitan Police, but women cap bands.
4. No, all ranks in the police should eventually wear chequered promotion as men.
5. c.

ANSWERS



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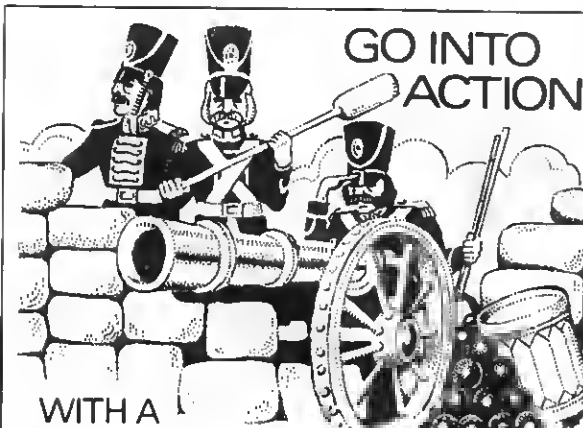
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